STIC-Biotech/ChemLib 112370

From: Richter, Johann
Sent: Monday, January 19, 2004 8:52 AM
To: Nguyen, Dave
Cc: Chan, Christina; STIC-Biotech/ChemLib
Subject: RE: Rush Search request 10/068,160

Approved.

Johann R. Richter, Ph.D., Esq.
Supervisory Patent Examiner
Biotechnology and Organic Chemistry
Art Unit 1621
703-308-4532

-----Original Message-----
From: Nguyen, Dave
Sent: Friday, January 16, 2004 8:57 PM
To: Richter, Johann
Cc: Chan, Christina; STIC-Biotech/ChemLib
Subject: Rush Search request 10/068,160

This case is due this bi-week! please rush: Please search SEQ ID NOS: 1, 54, 73, and 74 with the provision that the hit oligos are less than 500 nucleotide residues.

Thanks
Dave Nguyen
Ramsen Bldg
2D31
571-272-0731

Searcher: Sheppard
Phone:
Location:
Date Picked Up:
Date Completed: 1/22/04
Searcher Prep/Review:
Clerical:
Online time:

TYPE OF SEARCH:
NA Sequences:
AA Sequences:
Structures:
Bibliographic:
Litigation:
Full text:
Patent Family:
Other:

VENDOR/COST (where applic.)
STN:
DIALOG:
Questel/Orbit:
DRLink:
Lexis/Nexis:
Sequence Sys.:
WWW/Internet:
Other (specify):

STIC Search Report
Biotech-Chem Library

STIC Database Tracking Number: 112370

TO: Dave Nguyen **Location: rem/2d31** **Art Unit: 1632** Jan 22, **2004** **Case Serial Number: 10/068160**	**From: P. Sheppard** **Location: Remsen Building** **Phone: (571) 272-2529** **sheppard@uspto.gov**

Search Notes

GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: January 20, 2004, 17:24:48 ; Search time 31.4706 Seconds
(without alignments)
280.505 Million cell updates/sec

Title: US-10-068-160-1
Perfect score: 20
Sequence: 1 ggtgcatcgatgcaggggggg 20

Scoring table: OLIGO_NUC
Gapop 60.0 , Gapext 60.0

Searched: 569978 seqs, 220691566 residues

Word size : 0

Total number of hits satisfying chosen parameters: 955846

Minimum DB seq length: 0
Maximum DB seq length: 500

Post-processing: Listing first 45 summaries

Database : Issued_Patents_NA:*
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2: /cgn2_6/ptodata/2/ina/5B_COMB.seq:*
3: /cgn2_6/ptodata/2/ina/6A_COMB.seq:*
4: /cgn2_6/ptodata/2/ina/6B_COMB.seq:*
5: /cgn2_6/ptodata/2/ina/PCTUS_COMB.seq:*
6: /cgn2_6/ptodata/2/ina/backfiles1.seq:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	Result No.	Score	% Query Match	Length	DB	ID	Description
c	1	13	65.0	31	1	US-08-433-126A-137	Sequence 137, App
c	2	13	65.0	31	1	US-08-433-124A-137	Sequence 137, App
c	3	13	65.0	31	3	US-08-976-413A-137	Sequence 137, App
c	4	13	65.0	31	5	PCT-US96-06059-137	Sequence 137, App
c	5	13	65.0	38	1	US-08-433-126A-138	Sequence 138, App
c	6	13	65.0	38	1	US-08-433-124A-138	Sequence 138, App
c	7	13	65.0	38	3	US-08-976-413A-138	Sequence 138, App
c	8	13	65.0	38	5	PCT-US96-06059-138	Sequence 138, App
c	9	13	65.0	87	1	US-08-433-126A-59	Sequence 59, Appl
c	10	13	65.0	87	1	US-08-433-124A-59	Sequence 59, Appl
c	11	13	65.0	87	3	US-08-976-413A-59	Sequence 59, Appl
c	12	13	65.0	87	5	PCT-US96-06059-59	Sequence 59, Appl
c	13	13	65.0	306	2	US-08-630-822A-91	Sequence 91, Appl
c	14	13	65.0	306	2	US-09-005-069-91	Sequence 91, Appl
c	15	13	65.0	306	4	US-09-171-156A-40	Sequence 40, Appl
c	16	13	65.0	306	4	US-09-004-730A-40	Sequence 40, Appl
c	17	13	65.0	306	4	US-08-981-799A-40	Sequence 40, Appl
	18	12	60.0	38	2	US-08-464-257-7	Sequence 7, Appli
	19	12	60.0	38	2	US-09-062-375-7	Sequence 7, Appli
	20	12	60.0	38	3	US-09-203-796A-7	Sequence 7, Appli
c	21	12	60.0	63	3	US-09-237-712-67	Sequence 67, Appl
c	22	12	60.0	171	4	US-09-187-108-3	Sequence 3, Appli
c	23	12	60.0	171	6	5466585-4	Patent No. 5466585
c	24	12	60.0	226	4	US-09-016-434-272	Sequence 272, App
c	25	12	60.0	253	4	US-09-187-108-5	Sequence 5, Appli
c	26	12	60.0	253	6	5466585-5	Patent No. 5466585
	27	12	60.0	306	2	US-08-630-822A-91	Sequence 91, Appl
	28	12	60.0	306	2	US-09-005-069-91	Sequence 91, Appl
	29	12	60.0	306	4	US-09-171-156A-40	Sequence 40, Appl
	30	12	60.0	306	4	US-09-004-730A-40	Sequence 40, Appl
	31	12	60.0	306	4	US-08-981-799A-40	Sequence 40, Appl
c	32	12	60.0	411	4	US-09-615-192A-179	Sequence 179, App
	33	11	55.0	17	4	US-09-371-772B-4239	Sequence 4239, Ap
	34	11	55.0	20	2	US-08-602-725-13	Sequence 13, Appl
c	35	11	55.0	26	1	US-07-832-905B-70	Sequence 70, Appl
c	36	11	55.0	26	2	US-08-700-757-70	Sequence 70, Appl
c	37	11	55.0	26	4	US-09-123-728-1	Sequence 1, Appli
	38	11	55.0	37	3	US-08-558-935-5	Sequence 5, Appli
	39	11	55.0	37	3	US-09-411-687A-13	Sequence 13, Appl
c	40	11	55.0	37	3	US-09-411-687A-13	Sequence 13, Appl
c	41	11	55.0	38	2	US-08-464-257-7	Sequence 7, Appli
c	42	11	55.0	38	2	US-09-062-375-7	Sequence 7, Appli
c	43	11	55.0	38	3	US-09-203-796A-7	Sequence 7, Appli
	44	11	55.0	45	1	US-08-089-862-7	Sequence 7, Appli
	45	11	55.0	45	1	US-08-587-333-14	Sequence 14, Appl

ALIGNMENTS

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RESULT 1
US-08-433-126A-137/c
; Sequence 137, Application US/08433126A
; Patent No. 5688935
;  GENERAL INFORMATION:
;    APPLICANT:  STEPHENS, ANDREW
;    APPLICANT:  SCHNEIDER, DAN
;    APPLICANT:  GOLD, LARRY
;    TITLE OF INVENTION:  NUCLEIC ACID LIGANDS OF TISSUE
;    TITLE OF INVENTION:  TARGET
;    NUMBER OF SEQUENCES:  241
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Swanson & Bratschun, L.L.C.
;      STREET:  8400 E. Prentice Avenue, Suite 200
;      CITY:  Englewood
;      STATE:  Colorado
;      COUNTRY:  USA
;      ZIP:  80111
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette, 3 1/2 diskette, 1.44 MG
;      COMPUTER:  IBM pc compatible
;      OPERATING SYSTEM:  MS-DOS
;      SOFTWARE:  WordPerfect 6.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/433,126A
;      FILING DATE:  03 MAY 1995
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/714,131
;      FILING DATE:  10-JUNE-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/536,428
;      FILING DATE:  11-JUNE-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/964,624
;      FILING DATE:  21-OCTOBER-1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Barry J. Swanson
;      REGISTRATION NUMBER:  33,215
;      REFERENCE/DOCKET NUMBER:  NEX31.2
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (303) 793-3333
;      TELEFAX:  (303) 793-3433
;  INFORMATION FOR SEQ ID NO:  137:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  31 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    FEATURE:
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;      OTHER INFORMATION:  All C's are 2'-F cytosine
;    FEATURE:
;      OTHER INFORMATION:  All U's are 2'-F uracil
US-08-433-126A-137

  Query Match             65.0%;  Score 13;  DB 1;  Length 31;
  Best Local Similarity   100.0%;  Pred. No. 55;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          6 ATCGATGCAGGGG 18
              |||||||||||||
Db         13 ATCGATGCAGGGG 1


RESULT 2
US-08-433-124A-137/c
; Sequence 137, Application US/08433124A
; Patent No. 5750342
;  GENERAL INFORMATION:
;    APPLICANT:  STEPHENS, ANDREW
;    APPLICANT:  SCHNEIDER, DAN
;    APPLICANT:  GOLD, LARRY
;    TITLE OF INVENTION:  NUCLEIC ACID LIGANDS OF TISSUE
;    TITLE OF INVENTION:  TARGET
;    NUMBER OF SEQUENCES:  241
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Swanson & Bratschun, L.L.C.
;      STREET:  8400 E. Prentice Avenue, Suite 200
;      CITY:  Englewood
;      STATE:  Colorado
;      COUNTRY:  USA
;      ZIP:  80111
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette, 3 1/2 diskette, 1.44 MG
;      COMPUTER:  IBM pc compatible
;      OPERATING SYSTEM:  MS-DOS
;      SOFTWARE:  WordPerfect 6.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/433,124A
;      FILING DATE:  03 MAY 1995
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/714,131
;      FILING DATE:  10-JUNE-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/536,428
;      FILING DATE:  11-JUNE-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/964,624
;      FILING DATE:  21-OCTOBER-1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Barry J. Swanson
;      REGISTRATION NUMBER:  33,215
;      REFERENCE/DOCKET NUMBER:  NEX31.2
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (303) 793-3333
;      TELEFAX:  (303) 793-3433
;  INFORMATION FOR SEQ ID NO:  137:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  31 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    FEATURE:
;      OTHER INFORMATION:  All C's are 2'-F cytosine
;    FEATURE:
;      OTHER INFORMATION:  All U's are 2'-F uracil
US-08-433-124A-137

  Query Match             65.0%;  Score 13;  DB 1;  Length 31;
  Best Local Similarity   100.0%;  Pred. No. 55;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          6 ATCGATGCAGGGG 18
              |||||||||||||
Db         13 ATCGATGCAGGGG 1


RESULT 3
US-08-976-413A-137/c
; Sequence 137, Application US/08976413A
; Patent No. 6127119
;  GENERAL INFORMATION:
;    APPLICANT:  STEPHENS, ANDREW
;    APPLICANT:  GOLD, LARRY
;    APPLICANT:  SPECK, ULRICH
;    TITLE OF INVENTION:  NUCLEIC ACID LIGANDS OF TISSUE TARGET
;    NUMBER OF SEQUENCES:  440
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Swanson & Bratschun, L.L.C.
;      STREET:  8400 E. Prentice Avenue, Suite 200
;      CITY:  Englewood
;      STATE:  Colorado
;      COUNTRY:  USA
;      ZIP:  80111
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette, 3 1/2 diskette, 1.44 MG
;      COMPUTER:  IBM pc compatible
;      OPERATING SYSTEM:  MS-DOS
;      SOFTWARE:  WordPerfect 8.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/976,413A
;      FILING DATE:  21-NOVEMBER-1997
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/433,124
;      FILING DATE:  03-MAY-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/714,131
;      FILING DATE:  10-JUNE-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/536,428
;      FILING DATE:  11-JUNE-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/964,624
;      FILING DATE:  21-OCTOBER-1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Barry J. Swanson
;      REGISTRATION NUMBER:  33,215
;      REFERENCE/DOCKET NUMBER:  NEX31/CIP
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (303) 793-3333
;      TELEFAX:  (303) 793-3433
;  INFORMATION FOR SEQ ID NO:  137:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  31 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    FEATURE:
;      OTHER INFORMATION:  All C's are 2'-F cytosine
;    FEATURE:
;      OTHER INFORMATION:  All U's are 2'-F uracil
US-08-976-413A-137

  Query Match             65.0%;  Score 13;  DB 3;  Length 31;
  Best Local Similarity   100.0%;  Pred. No. 55;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          6 ATCGATGCAGGGG 18
              |||||||||||||
Db         13 ATCGATGCAGGGG 1


RESULT 4
PCT-US96-06059-137/c
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; Sequence 137, Application PC/TUS9606059
;  GENERAL INFORMATION:
;    APPLICANT:  STEPHENS, ANDREW
;    APPLICANT:  SCHNEIDER, DAN
;    APPLICANT:  GOLD, LARRY
;    TITLE OF INVENTION:  NUCLEIC ACID LIGANDS OF TISSUE
;    TITLE OF INVENTION:  TARGET
;    NUMBER OF SEQUENCES:  241
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Swanson & Bratschun, L.L.C.
;      STREET:  8400 E. Prentice Avenue, Suite 200
;      CITY:  Englewood
;      STATE:  Colorado
;      COUNTRY:  USA
;      ZIP:  80111
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette, 3 1/2 diskette, 1.44 MG
;      COMPUTER:  IBM pc compatible
;      OPERATING SYSTEM:  MS-DOS
;      SOFTWARE:  WordPerfect 6.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/US96/06059
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/433,124
;      FILING DATE:  03-MAY-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/433,126
;      FILING DATE:  03-MAY-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/714,131
;      FILING DATE:  10-JUNE-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/536,428
;      FILING DATE:  11-JUNE-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/964,624
;      FILING DATE:  21-OCTOBER-1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Barry J. Swanson
;      REGISTRATION NUMBER:  33,215
;      REFERENCE/DOCKET NUMBER:  NEX31.2
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (303) 793-3333
;      TELEFAX:  (303) 793-3433
;  INFORMATION FOR SEQ ID NO:  137:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  31 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    FEATURE:
;      OTHER INFORMATION:  All C's are 2'-F cytosine
;    FEATURE:
;      OTHER INFORMATION:  All U's are 2'-F uracil
PCT-US96-06059-137

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  Best Local Similarity   100.0%;  Pred. No. 55;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          6 ATCGATGCAGGGG 18
              |||||||||||||
Db         13 ATCGATGCAGGGG 1


RESULT 5
US-08-433-126A-138/c
; Sequence 138, Application US/08433126A
; Patent No. 5688935
;  GENERAL INFORMATION:
;    APPLICANT:  STEPHENS, ANDREW
;    APPLICANT:  SCHNEIDER, DAN
;    APPLICANT:  GOLD, LARRY
;    TITLE OF INVENTION:  NUCLEIC ACID LIGANDS OF TISSUE
;    TITLE OF INVENTION:  TARGET
;    NUMBER OF SEQUENCES:  241
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Swanson & Bratschun, L.L.C.
;      STREET:  8400 E. Prentice Avenue, Suite 200
;      CITY:  Englewood
;      STATE:  Colorado
;      COUNTRY:  USA
;      ZIP:  80111
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette, 3 1/2 diskette, 1.44 MG
;      COMPUTER:  IBM pc compatible
;      OPERATING SYSTEM:  MS-DOS
;      SOFTWARE:  WordPerfect 6.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/433,126A
;      FILING DATE:  03 MAY 1995
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/714,131
;      FILING DATE:  10-JUNE-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/536,428
;      FILING DATE:  11-JUNE-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/964,624
;      FILING DATE:  21-OCTOBER-1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Barry J. Swanson
;      REGISTRATION NUMBER:  33,215
;      REFERENCE/DOCKET NUMBER:  NEX31.2
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (303) 793-3333
;      TELEFAX:  (303) 793-3433
;  INFORMATION FOR SEQ ID NO:  138:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  38 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    FEATURE:
;      OTHER INFORMATION:  All C's are 2'-F cytosine
;    FEATURE:
;      OTHER INFORMATION:  All U's are 2'-F uracil
US-08-433-126A-138

  Query Match             65.0%;  Score 13;  DB 1;  Length 38;
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  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          6 ATCGATGCAGGGG 18
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Db         13 ATCGATGCAGGGG 1


RESULT 6
US-08-433-124A-138/c
; Sequence 138, Application US/08433124A
; Patent No. 5750342
;  GENERAL INFORMATION:
;    APPLICANT:  STEPHENS, ANDREW
;    APPLICANT:  SCHNEIDER, DAN
;    APPLICANT:  GOLD, LARRY
;    TITLE OF INVENTION:  NUCLEIC ACID LIGANDS OF TISSUE
;    TITLE OF INVENTION:  TARGET
;    NUMBER OF SEQUENCES:  241
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Swanson & Bratschun, L.L.C.
;      STREET:  8400 E. Prentice Avenue, Suite 200
;      CITY:  Englewood
```

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;       STATE:  Colorado
;       COUNTRY:  USA
;       ZIP:  80111
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  Diskette, 3 1/2 diskette, 1.44 MG
;       COMPUTER:  IBM pc compatible
;       OPERATING SYSTEM:  MS-DOS
;       SOFTWARE:  WordPerfect 6.0
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/433,124A
;       FILING DATE:  03 MAY 1995
;       CLASSIFICATION:  435
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  07/714,131
;       FILING DATE:  10-JUNE-1991
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  07/536,428
;       FILING DATE:  11-JUNE-1990
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  07/964,624
;       FILING DATE:  21-OCTOBER-1992
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Barry J. Swanson
;       REGISTRATION NUMBER:  33,215
;       REFERENCE/DOCKET NUMBER:  NEX31.2
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (303) 793-3333
;       TELEFAX:  (303) 793-3433
;   INFORMATION FOR SEQ ID NO:  138:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  38 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
;     FEATURE:
;       OTHER INFORMATION:  All C's are 2'-F cytosine
;     FEATURE:
;       OTHER INFORMATION:  All U's are 2'-F uracil
US-08-433-124A-138

  Query Match             65.0%;  Score 13;  DB 1;  Length 38;
  Best Local Similarity   100.0%;  Pred. No. 55;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          6 ATCGATGCAGGGG 18
              |||||||||||||
Db         13 ATCGATGCAGGGG 1


RESULT 7
US-08-976-413A-138/c
; Sequence 138, Application US/08976413A
; Patent No. 6127119
;  GENERAL INFORMATION:
;     APPLICANT:  STEPHENS, ANDREW
;     APPLICANT:  GOLD, LARRY
;     APPLICANT:  SPECK, ULRICH
;     TITLE OF INVENTION:  NUCLEIC ACID LIGANDS OF TISSUE TARGET
;     NUMBER OF SEQUENCES:  440
;     CORRESPONDENCE ADDRESS:
;       ADDRESSEE:  Swanson & Bratschun, L.L.C.
;       STREET:  8400 E. Prentice Avenue, Suite 200
;       CITY:  Englewood
;       STATE:  Colorado
;       COUNTRY:  USA
;       ZIP:  80111
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  Diskette, 3 1/2 diskette, 1.44 MG
;       COMPUTER:  IBM pc compatible
;       OPERATING SYSTEM:  MS-DOS
;       SOFTWARE:  WordPerfect 8.0
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/976,413A
;       FILING DATE:  21-NOVEMBER-1997
;       CLASSIFICATION:  435
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  08/433,124
;       FILING DATE:  03-MAY-1995
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  07/714,131
;       FILING DATE:  10-JUNE-1991
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  07/536,428
;       FILING DATE:  11-JUNE-1990
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  07/964,624
;       FILING DATE:  21-OCTOBER-1992
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Barry J. Swanson
;       REGISTRATION NUMBER:  33,215
;       REFERENCE/DOCKET NUMBER:  NEX31/CIP
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (303) 793-3333
;       TELEFAX:  (303) 793-3433
;   INFORMATION FOR SEQ ID NO:  138:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  38 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
;     FEATURE:
;       OTHER INFORMATION:  All C's are 2'-F cytosine
;     FEATURE:
;       OTHER INFORMATION:  All U's are 2'-F uracil
US-08-976-413A-138

  Query Match             65.0%;  Score 13;  DB 3;  Length 38;
  Best Local Similarity   100.0%;  Pred. No. 55;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          6 ATCGATGCAGGGG 18
              |||||||||||||
Db         13 ATCGATGCAGGGG 1


RESULT 8
PCT-US96-06059-138/c
; Sequence 138, Application PC/TUS9606059
;  GENERAL INFORMATION:
;     APPLICANT:  STEPHENS, ANDREW
;     APPLICANT:  SCHNEIDER, DAN
;     APPLICANT:  GOLD, LARRY
;     TITLE OF INVENTION:  NUCLEIC ACID LIGANDS OF TISSUE
;     TITLE OF INVENTION:  TARGET
;     NUMBER OF SEQUENCES:  241
;     CORRESPONDENCE ADDRESS:
;       ADDRESSEE:  Swanson & Bratschun, L.L.C.
;       STREET:  8400 E. Prentice Avenue, Suite 200
;       CITY:  Englewood
;       STATE:  Colorado
;       COUNTRY:  USA
;       ZIP:  80111
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  Diskette, 3 1/2 diskette, 1.44 MG
;       COMPUTER:  IBM pc compatible
;       OPERATING SYSTEM:  MS-DOS
;       SOFTWARE:  WordPerfect 6.0
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  PCT/US96/06059
;       FILING DATE:
;       CLASSIFICATION:
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  08/433,124
;       FILING DATE:  03-MAY-1995
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  08/433,126
```

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;       FILING DATE:  03-MAY-1995
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  07/714,131
;       FILING DATE:  10-JUNE-1991
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  07/536,428
;       FILING DATE:  11-JUNE-1990
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  07/964,624
;       FILING DATE:  21-OCTOBER-1992
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Barry J. Swanson
;       REGISTRATION NUMBER:  33,215
;       REFERENCE/DOCKET NUMBER:  NEX31.2
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (303) 793-3333
;       TELEFAX:  (303) 793-3433
;   INFORMATION FOR SEQ ID NO:  138:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  38 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
;     FEATURE:
;       OTHER INFORMATION:  All C's are 2'-F cytosine
;     FEATURE:
;       OTHER INFORMATION:  All U's are 2'-F uracil
PCT-US96-06059-138

  Query Match             65.0%;  Score 13;  DB 5;  Length 38;
  Best Local Similarity   100.0%;  Pred. No. 55;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          6 ATCGATGCAGGGG 18
              |||||||||||||
Db         13 ATCGATGCAGGGG 1


RESULT 9
US-08-433-126A-59/c
; Sequence 59, Application US/08433126A
; Patent No. 5688935
;  GENERAL INFORMATION:
;    APPLICANT:  STEPHENS, ANDREW
;    APPLICANT:  SCHNEIDER, DAN
;    APPLICANT:  GOLD, LARRY
;    TITLE OF INVENTION:  NUCLEIC ACID LIGANDS OF TISSUE
;    TITLE OF INVENTION:  TARGET
;    NUMBER OF SEQUENCES:  241
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Swanson & Bratschun, L.L.C.
;      STREET:  8400 E. Prentice Avenue, Suite 200
;      CITY:  Englewood
;      STATE:  Colorado
;      COUNTRY:  USA
;      ZIP:  80111
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette, 3 1/2 diskette, 1.44 MG
;      COMPUTER:  IBM pc compatible
;      OPERATING SYSTEM:  MS-DOS
;      SOFTWARE:  WordPerfect 6.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/433,126A
;      FILING DATE:  03 MAY 1995
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/714,131
;      FILING DATE:  10-JUNE-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/536,428
;      FILING DATE:  11-JUNE-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/964,624
;      FILING DATE:  21-OCTOBER-1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Barry J. Swanson
;      REGISTRATION NUMBER:  33,215
;      REFERENCE/DOCKET NUMBER:  NEX31.2
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (303) 793-3333
;      TELEFAX:  (303) 793-3433
;  INFORMATION FOR SEQ ID NO:  59:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  87 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    FEATURE:
;      OTHER INFORMATION:  All C's are 2'-F cytosine
;    FEATURE:
;      OTHER INFORMATION:  All U's are 2'-F uracil
US-08-433-126A-59

  Query Match             65.0%;  Score 13;  DB 1;  Length 87;
  Best Local Similarity   100.0%;  Pred. No. 56;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          6 ATCGATGCAGGGG 18
              |||||||||||||
Db         50 ATCGATGCAGGGG 38


RESULT 10
US-08-433-124A-59/c
; Sequence 59, Application US/08433124A
; Patent No. 5750342
;  GENERAL INFORMATION:
;    APPLICANT:  STEPHENS, ANDREW
;    APPLICANT:  SCHNEIDER, DAN
;    APPLICANT:  GOLD, LARRY
;    TITLE OF INVENTION:  NUCLEIC ACID LIGANDS OF TISSUE
;    TITLE OF INVENTION:  TARGET
;    NUMBER OF SEQUENCES:  241
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Swanson & Bratschun, L.L.C.
;      STREET:  8400 E. Prentice Avenue, Suite 200
;      CITY:  Englewood
;      STATE:  Colorado
;      COUNTRY:  USA
;      ZIP:  80111
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette, 3 1/2 diskette, 1.44 MG
;      COMPUTER:  IBM pc compatible
;      OPERATING SYSTEM:  MS-DOS
;      SOFTWARE:  WordPerfect 6.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/433,124A
;      FILING DATE:  03 MAY 1995
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/714,131
;      FILING DATE:  10-JUNE-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/536,428
;      FILING DATE:  11-JUNE-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/964,624
;      FILING DATE:  21-OCTOBER-1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Barry J. Swanson
;      REGISTRATION NUMBER:  33,215
;      REFERENCE/DOCKET NUMBER:  NEX31.2
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (303) 793-3333
;      TELEFAX:  (303) 793-3433
;  INFORMATION FOR SEQ ID NO:  59:
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;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  87 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
;     FEATURE:
;       OTHER INFORMATION:  All C's are 2'-F cytosine
;     FEATURE:
;       OTHER INFORMATION:  All U's are 2'-F uracil
US-08-433-124A-59

  Query Match             65.0%;  Score 13;  DB 1;  Length 87;
  Best Local Similarity   100.0%;  Pred. No. 56;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          6 ATCGATGCAGGGG 18
              |||||||||||||
Db         50 ATCGATGCAGGGG 38


RESULT 11
US-08-976-413A-59/c
; Sequence 59, Application US/08976413A
; Patent No. 6127119
;  GENERAL INFORMATION:
;     APPLICANT:  STEPHENS, ANDREW
;     APPLICANT:  GOLD, LARRY
;     APPLICANT:  SPECK, ULRICH
;     TITLE OF INVENTION:  NUCLEIC ACID LIGANDS OF TISSUE TARGET
;     NUMBER OF SEQUENCES:  440
;     CORRESPONDENCE ADDRESS:
;       ADDRESSEE:  Swanson & Bratschun, L.L.C.
;       STREET:  8400 E. Prentice Avenue, Suite 200
;       CITY:  Englewood
;       STATE:  Colorado
;       COUNTRY:  USA
;       ZIP:  80111
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  Diskette, 3 1/2 diskette, 1.44 MG
;       COMPUTER:  IBM pc compatible
;       OPERATING SYSTEM:  MS-DOS
;       SOFTWARE:  WordPerfect 8.0
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/976,413A
;       FILING DATE:  21-NOVEMBER-1997
;       CLASSIFICATION:  435
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  08/433,124
;       FILING DATE:  03-MAY-1995
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  07/714,131
;       FILING DATE:  10-JUNE-1991
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  07/536,428
;       FILING DATE:  11-JUNE-1990
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  07/964,624
;       FILING DATE:  21-OCTOBER-1992
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Barry J. Swanson
;       REGISTRATION NUMBER:  33,215
;       REFERENCE/DOCKET NUMBER:  NEX31/CIP
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (303) 793-3333
;       TELEFAX:  (303) 793-3433
;  INFORMATION FOR SEQ ID NO:  59:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  87 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
;     FEATURE:
;       OTHER INFORMATION:  All C's are 2'-F cytosine
;     FEATURE:
;       OTHER INFORMATION:  All U's are 2'-F uracil
US-08-976-413A-59

  Query Match             65.0%;  Score 13;  DB 3;  Length 87;
  Best Local Similarity   100.0%;  Pred. No. 56;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          6 ATCGATGCAGGGG 18
              |||||||||||||
Db         50 ATCGATGCAGGGG 38


RESULT 12
PCT-US96-06059-59/c
; Sequence 59, Application PC/TUS9606059
;  GENERAL INFORMATION:
;     APPLICANT:  STEPHENS, ANDREW
;     APPLICANT:  SCHNEIDER, DAN
;     APPLICANT:  GOLD, LARRY
;     TITLE OF INVENTION:  NUCLEIC ACID LIGANDS OF TISSUE
;     TITLE OF INVENTION:  TARGET
;     NUMBER OF SEQUENCES:  241
;     CORRESPONDENCE ADDRESS:
;       ADDRESSEE:  Swanson & Bratschun, L.L.C.
;       STREET:  8400 E. Prentice Avenue, Suite 200
;       CITY:  Englewood
;       STATE:  Colorado
;       COUNTRY:  USA
;       ZIP:  80111
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  Diskette, 3 1/2 diskette, 1.44 MG
;       COMPUTER:  IBM pc compatible
;       OPERATING SYSTEM:  MS-DOS
;       SOFTWARE:  WordPerfect 6.0
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  PCT/US96/06059
;       FILING DATE:
;       CLASSIFICATION:
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  08/433,124
;       FILING DATE:  03-MAY-1995
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  08/433,126
;       FILING DATE:  03-MAY-1995
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  07/714,131
;       FILING DATE:  10-JUNE-1991
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  07/536,428
;       FILING DATE:  11-JUNE-1990
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  07/964,624
;       FILING DATE:  21-OCTOBER-1992
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Barry J. Swanson
;       REGISTRATION NUMBER:  33,215
;       REFERENCE/DOCKET NUMBER:  NEX31.2
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (303) 793-3333
;       TELEFAX:  (303) 793-3433
;  INFORMATION FOR SEQ ID NO:  59:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  87 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
;     FEATURE:
;       OTHER INFORMATION:  All C's are 2'-F cytosine
;     FEATURE:
;       OTHER INFORMATION:  All U's are 2'-F uracil
PCT-US96-06059-59
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  Query Match             65.0%;  Score 13;  DB 5;  Length 87;
  Best Local Similarity   100.0%;  Pred. No. 56;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          6 ATCGATGCAGGGG 18
              |||||||||||||
Db         50 ATCGATGCAGGGG 38


RESULT 13
US-08-630-822A-91/c
; Sequence 91, Application US/08630822A
; Patent No. 5840695
;  GENERAL INFORMATION:
;    APPLICANT:  FRANK, GLENN R.
;    APPLICANT:  HUNTER, SHIRLEY WU
;    APPLICANT:  WALLENFELS, LYNDA
;    TITLE OF INVENTION:  NOVEL ECTOPARASITE SALIVA PROTEINS
;    TITLE OF INVENTION:  AND APPARATUS TO COLLECT SUCH PROTEINS
;    NUMBER OF SEQUENCES:  107
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Sheridan Ross P.C.
;      STREET:  1700 Lincoln Street, Suite 3500
;      CITY:  Denver
;      STATE:  Colorado
;      COUNTRY:  U.S.A.
;      ZIP:  80203
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/630,822A
;      FILING DATE:  11-APR-1996
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  CONNELL, GARY J.
;      REGISTRATION NUMBER:  32,020
;      REFERENCE/DOCKET NUMBER:  2618-17-C3
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (303) 863-9700
;      TELEFAX:  (303) 863-0223
;  INFORMATION FOR SEQ ID NO:  91:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  306 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
US-08-630-822A-91

  Query Match             65.0%;  Score 13;  DB 2;  Length 306;
  Best Local Similarity   100.0%;  Pred. No. 57;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 GTGCATCGATGCA 14
              |||||||||||||
Db         74 GTGCATCGATGCA 62


RESULT 14
US-09-005-069-91/c
; Sequence 91, Application US/09005069
; Patent No. 5932470
;  GENERAL INFORMATION:
;    APPLICANT:  FRANK, GLENN R.
;    APPLICANT:  HUNTER, SHIRLEY WU
;    APPLICANT:  WALLENFELS, LYNDA
;    TITLE OF INVENTION:  NOVEL ECTOPARASITE SALIVA PROTEINS
;    TITLE OF INVENTION:  AND APPARATUS TO COLLECT SUCH PROTEINS
;    NUMBER OF SEQUENCES:  107
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Sheridan Ross P.C.
;      STREET:  1700 Lincoln Street, Suite 3500
;      CITY:  Denver
;      STATE:  Colorado
;      COUNTRY:  U.S.A.
;      ZIP:  80203
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/005,069
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/630,822
;      FILING DATE:  11-APR-1996
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  CONNELL, GARY J.
;      REGISTRATION NUMBER:  32,020
;      REFERENCE/DOCKET NUMBER:  2618-17-C3
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (303) 863-9700
;      TELEFAX:  (303) 863-0223
;  INFORMATION FOR SEQ ID NO:  91:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  306 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
US-09-005-069-91

  Query Match             65.0%;  Score 13;  DB 2;  Length 306;
  Best Local Similarity   100.0%;  Pred. No. 57;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 GTGCATCGATGCA 14
              |||||||||||||
Db         74 GTGCATCGATGCA 62


RESULT 15
US-09-171-156A-40/c
; Sequence 40, Application US/09171156A
; Patent No. 6368846
;  GENERAL INFORMATION:
;       APPLICANT: Hunter, Shirley Wu
;                  Sim, Gek-Kee
;                  Weber, Eric R.
;       TITLE OF INVENTION: NOVEL ECTOPARASITE SALIVA PROTEINS AND
;                           APPARATUS TO COLLECT SUCH PROTEINS
;       NUMBER OF SEQUENCES: 88
;       CORRESPONDENCE ADDRESS:
;            ADDRESSEE: SHERIDAN ROSS P.C.
;            STREET: 1560 BROADWAY, SUITE 1200
;            CITY: DENVER
;            STATE: CO
;            COUNTRY: U.S.A.
;            ZIP: 80202
;       COMPUTER READABLE FORM:
;            MEDIUM TYPE: Floppy disk
;            COMPUTER: IBM PC compatible
;            OPERATING SYSTEM: PC-DOS/MS-DOS
;            SOFTWARE: PatentIn Release #1.0, Version #1.30
;       CURRENT APPLICATION DATA:
;            APPLICATION NUMBER: US/09/171,156A
;            FILING DATE: 04-Mar-1999
;            CLASSIFICATION: <Unknown>
;       ATTORNEY/AGENT INFORMATION:
;            NAME: Connell, Gary J.
;            REGISTRATION NUMBER: 32,020
```

; REFERENCE/DOCKET NUMBER: 2618-17-C4-PUS
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 303/863-9700
; TELEFAX: 303/863-0223
; INFORMATION FOR SEQ ID NO: 40:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 306 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: cDNA
; SEQUENCE DESCRIPTION: SEQ ID NO: 40:
US-09-171-156A-40

Query Match 65.0%; Score 13; DB 4; Length 306;
Best Local Similarity 100.0%; Pred. No. 57;
Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          2 GTGCATCGATGCA 14
              |||||||||||||
Db         74 GTGCATCGATGCA 62
```

Search completed: January 20, 2004, 20:03:10
Job time : 33.4706 secs

GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: January 20, 2004, 17:31:58 ; Search time 707.059 Seconds
(without alignments)
1157.177 Million cell updates/sec

Title: US-10-068-160-1
Perfect score: 20
Sequence: 1 ggtgcatcgatgcaggggggg 20

Scoring table: OLIGO_NUC
Gapop 60.0 , Gapext 60.0

Searched: 2888711 seqs, 20454813386 residues

Word size : 0

Total number of hits satisfying chosen parameters: 3159832

Minimum DB seq length: 0
Maximum DB seq length: 500

Post-processing: Listing first 45 summaries

Database : GenEmbl:*
1: gb_ba:*
2: gb_htg:*
3: gb_in:*
4: gb_om:*
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8: gb_pl:*
9: gb_pr:*
10: gb_ro:*
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12: gb_sy:*
13: gb_un:*
14: gb_vi:*
15: em_ba:*
16: em_fun:*
17: em_hum:*
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26: em_ro:*
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29: em_vi:*
30: em_htg_hum:*
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33: em_htg_mus:*
34: em_htg_pln:*
35: em_htg_rod:*
36: em_htg_mam:*
37: em_htg_vrt:*
38: em_sy:*
39: em_htgo_hum:*
40: em_htgo_mus:*
41: em_htgo_other:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	20	100.0	20	6	AX194432	AX194432 Sequence
2	20	100.0	20	6	AX194434	AX194434 Sequence
3	20	100.0	20	6	AX194437	AX194437 Sequence
4	20	100.0	20	6	AX194438	AX194438 Sequence
5	20	100.0	20	6	AX194443	AX194443 Sequence
6	20	100.0	20	6	AX194472	AX194472 Sequence
7	20	100.0	20	6	AX352198	AX352198 Sequence
8	20	100.0	20	6	AX352209	AX352209 Sequence
9	20	100.0	20	6	AX352242	AX352242 Sequence
10	20	100.0	20	6	AX465382	AX465382 Sequence
11	20	100.0	20	6	AX465384	AX465384 Sequence
12	20	100.0	20	6	AX465387	AX465387 Sequence
13	20	100.0	20	6	AX465388	AX465388 Sequence
14	20	100.0	20	6	AX465393	AX465393 Sequence
15	20	100.0	20	6	AX465422	AX465422 Sequence
16	20	100.0	22	6	AX352204	AX352204 Sequence
17	20	100.0	22	6	AX352248	AX352248 Sequence
18	20	100.0	28	6	AX352219	AX352219 Sequence
19	20	100.0	28	6	AX352231	AX352231 Sequence
20	20	100.0	29	6	AX352237	AX352237 Sequence
21	20	100.0	30	6	AX352225	AX352225 Sequence
22	20	100.0	30	6	AX352230	AX352230 Sequence
23	20	100.0	32	6	AX352167	AX352167 Sequence
24	19	95.0	19	6	AX194453	AX194453 Sequence
25	19	95.0	19	6	AX194473	AX194473 Sequence
26	19	95.0	19	6	AX465403	AX465403 Sequence
27	19	95.0	19	6	AX465423	AX465423 Sequence
28	18	90.0	18	6	AX352207	AX352207 Sequence
29	18	90.0	18	6	AX352217	AX352217 Sequence
30	18	90.0	18	6	AX352255	AX352255 Sequence
31	18	90.0	20	6	AX352206	AX352206 Sequence
32	18	90.0	20	6	AX352216	AX352216 Sequence
33	18	90.0	20	6	AX352250	AX352250 Sequence
34	18	90.0	20	6	AX352254	AX352254 Sequence
35	18	90.0	26	6	AX352228	AX352228 Sequence
36	18	90.0	26	6	AX352240	AX352240 Sequence
37	18	90.0	28	6	AX352227	AX352227 Sequence
38	18	90.0	28	6	AX352239	AX352239 Sequence
39	17	85.0	17	6	AX194427	AX194427 Sequence
40	17	85.0	17	6	AX352205	AX352205 Sequence
41	17	85.0	17	6	AX352215	AX352215 Sequence
42	17	85.0	17	6	AX352249	AX352249 Sequence
43	17	85.0	17	6	AX352253	AX352253 Sequence
44	17	85.0	17	6	AX465377	AX465377 Sequence
45	17	85.0	25	6	AX352226	AX352226 Sequence

ALIGNMENTS

RESULT 1
AX194432
LOCUS AX194432 20 bp DNA linear PAT 28-AUG-2001
DEFINITION Sequence 32 from Patent WO0151500.
ACCESSION AX194432
VERSION AX194432.1 GI:15385088
KEYWORDS .
SOURCE synthetic construct
ORGANISM synthetic construct
artificial sequences.
REFERENCE 1
AUTHORS Klinman,D., Ishii,K. and Verthelyi,D.
TITLE Oligodeoxynucleotide and its use to induce an immune response
JOURNAL Patent: WO 0151500-A 32 19-JUL-2001;
Secretary of the Department of Health and Human Services (US)

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FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic DNA"
BASE COUNT        3 a      3 c      11 g      3 t
ORIGIN

  Query Match             100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 0.17;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 2
AX194434
LOCUS       AX194434                  20 bp    DNA     linear   PAT 28-AUG-2001
DEFINITION  Sequence 34 from Patent WO0151500.
ACCESSION   AX194434
VERSION     AX194434.1  GI:15385090
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Klinman,D., Ishii,K. and Verthelyi,D.
  TITLE     Oligodeoxynucleotide and its use to induce an immune response
  JOURNAL   Patent: WO 0151500-A 34 19-JUL-2001;
            Secretary of the Department of Health and Human Services (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic DNA"
BASE COUNT        3 a      3 c      11 g      3 t
ORIGIN

  Query Match             100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 0.17;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 3
AX194437
LOCUS       AX194437                  20 bp    DNA     linear   PAT 28-AUG-2001
DEFINITION  Sequence 37 from Patent WO0151500.
ACCESSION   AX194437
VERSION     AX194437.1  GI:15385093
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Klinman,D., Ishii,K. and Verthelyi,D.
  TITLE     Oligodeoxynucleotide and its use to induce an immune response
  JOURNAL   Patent: WO 0151500-A 37 19-JUL-2001;
            Secretary of the Department of Health and Human Services (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic DNA"
BASE COUNT        3 a      3 c      11 g      3 t
ORIGIN

  Query Match             100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 0.17;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 4
AX194438
LOCUS       AX194438                  20 bp    DNA     linear   PAT 28-AUG-2001
DEFINITION  Sequence 38 from Patent WO0151500.
ACCESSION   AX194438
VERSION     AX194438.1  GI:15385094
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Klinman,D., Ishii,K. and Verthelyi,D.
  TITLE     Oligodeoxynucleotide and its use to induce an immune response
  JOURNAL   Patent: WO 0151500-A 38 19-JUL-2001;
            Secretary of the Department of Health and Human Services (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic DNA"
BASE COUNT        3 a      3 c      11 g      3 t
ORIGIN

  Query Match             100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 0.17;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 5
AX194443
LOCUS       AX194443                  20 bp    DNA     linear   PAT 28-AUG-2001
DEFINITION  Sequence 43 from Patent WO0151500.
ACCESSION   AX194443
VERSION     AX194443.1  GI:15385099
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Klinman,D., Ishii,K. and Verthelyi,D.
  TITLE     Oligodeoxynucleotide and its use to induce an immune response
  JOURNAL   Patent: WO 0151500-A 43 19-JUL-2001;
            Secretary of the Department of Health and Human Services (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic DNA"
BASE COUNT        3 a      3 c      11 g      3 t
ORIGIN

  Query Match             100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 0.17;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
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                    ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 6
AX194472
LOCUS       AX194472                  20 bp    DNA     linear   PAT 28-AUG-2001
DEFINITION  Sequence 72 from Patent WO0151500.
ACCESSION   AX194472
VERSION     AX194472.1  GI:15385128
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Klinman,D., Ishii,K. and Verthelyi,D.
  TITLE     Oligodeoxynucleotide and its use to induce an immune response
  JOURNAL   Patent: WO 0151500-A 72 19-JUL-2001;
            Secretary of the Department of Health and Human Services (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic DNA"
BASE COUNT        3 a      3 c     11 g      3 t
ORIGIN

  Query Match             100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 0.17;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 7
AX352198
LOCUS       AX352198                  20 bp    DNA     linear   PAT 06-FEB-2002
DEFINITION  Sequence 494 from Patent WO0193902.
ACCESSION   AX352198
VERSION     AX352198.1  GI:18617481
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Mond,J.J., Flora,M. and Klinman,D.M.
  TITLE     Immunostimulatory rna/dna hybrid molecules
  JOURNAL   Patent: WO 0193902-A 494 13-DEC-2001;
            Biosynexus Incorporated (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic HDR"
BASE COUNT        3 a      3 c     11 g      3 t
ORIGIN

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  Best Local Similarity   100.0%;  Pred. No. 0.17;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 8
AX352209
LOCUS       AX352209                  20 bp    DNA     linear   PAT 06-FEB-2002
DEFINITION  Sequence 505 from Patent WO0193902.
ACCESSION   AX352209
VERSION     AX352209.1  GI:18617492
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Mond,J.J., Flora,M. and Klinman,D.M.
  TITLE     Immunostimulatory rna/dna hybrid molecules
  JOURNAL   Patent: WO 0193902-A 505 13-DEC-2001;
            Biosynexus Incorporated (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic HDR"
BASE COUNT        3 a      3 c     11 g      3 t
ORIGIN

  Query Match             100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 0.17;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 9
AX352242
LOCUS       AX352242                  20 bp    DNA     linear   PAT 06-FEB-2002
DEFINITION  Sequence 538 from Patent WO0193902.
ACCESSION   AX352242
VERSION     AX352242.1  GI:18617525
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Mond,J.J., Flora,M. and Klinman,D.M.
  TITLE     Immunostimulatory rna/dna hybrid molecules
  JOURNAL   Patent: WO 0193902-A 538 13-DEC-2001;
            Biosynexus Incorporated (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic HDR"
BASE COUNT        3 a      3 c     11 g      3 t
ORIGIN

  Query Match             100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 0.17;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 10
AX465382
LOCUS       AX465382                  20 bp    DNA     linear   PAT 16-JUL-2002
DEFINITION  Sequence 50 from Patent WO0211761.
ACCESSION   AX465382
VERSION     AX465382.1  GI:21899745
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
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REFERENCE   1
  AUTHORS   Mond,J.J., Prince,G. and Klinman,D.M.
  TITLE     Vaccine against RSV
  JOURNAL   Patent: WO 0211761-A 50 14-FEB-2002;
            HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY
            MEDICINE (US)
FEATURES             Location/Qualifiers
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                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic oligonucleotide"
BASE COUNT        3 a      3 c     11 g      3 t
ORIGIN

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  Best Local Similarity   100.0%;  Pred. No. 0.17;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 11
AX465384
LOCUS       AX465384                  20 bp    DNA     linear   PAT 16-JUL-2002
DEFINITION  Sequence 52 from Patent WO0211761.
ACCESSION   AX465384
VERSION     AX465384.1  GI:21899747
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Mond,J.J., Prince,G. and Klinman,D.M.
  TITLE     Vaccine against RSV
  JOURNAL   Patent: WO 0211761-A 52 14-FEB-2002;
            HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY
            MEDICINE (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic oligonucleotide"
BASE COUNT        3 a      3 c     11 g      3 t
ORIGIN

  Query Match             100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 0.17;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 12
AX465387
LOCUS       AX465387                  20 bp    DNA     linear   PAT 16-JUL-2002
DEFINITION  Sequence 55 from Patent WO0211761.
ACCESSION   AX465387
VERSION     AX465387.1  GI:21899750
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Mond,J.J., Prince,G. and Klinman,D.M.
  TITLE     Vaccine against RSV
  JOURNAL   Patent: WO 0211761-A 55 14-FEB-2002;
            HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY
            MEDICINE (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic oligonucleotide"
BASE COUNT        3 a      3 c     11 g      3 t
ORIGIN

  Query Match             100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 0.17;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 13
AX465388
LOCUS       AX465388                  20 bp    DNA     linear   PAT 16-JUL-2002
DEFINITION  Sequence 56 from Patent WO0211761.
ACCESSION   AX465388
VERSION     AX465388.1  GI:21899751
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Mond,J.J., Prince,G. and Klinman,D.M.
  TITLE     Vaccine against RSV
  JOURNAL   Patent: WO 0211761-A 56 14-FEB-2002;
            HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY
            MEDICINE (US)
FEATURES             Location/Qualifiers
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                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic oligonucleotide"
BASE COUNT        3 a      3 c     11 g      3 t
ORIGIN

  Query Match             100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 0.17;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 14
AX465393
LOCUS       AX465393                  20 bp    DNA     linear   PAT 16-JUL-2002
DEFINITION  Sequence 61 from Patent WO0211761.
ACCESSION   AX465393
VERSION     AX465393.1  GI:21899756
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Mond,J.J., Prince,G. and Klinman,D.M.
  TITLE     Vaccine against RSV
  JOURNAL   Patent: WO 0211761-A 61 14-FEB-2002;
            HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY
            MEDICINE (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
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                     /db_xref="taxon:32630"
                     /note="Synthetic oligonucleotide"
BASE COUNT        3 a      3 c     11 g      3 t
ORIGIN

  Query Match            100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity  100.0%;  Pred. No. 0.17;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 15
AX465422
LOCUS       AX465422                 20 bp    DNA     linear   PAT 16-JUL-2002
DEFINITION  Sequence 90 from Patent WO0211761.
ACCESSION   AX465422
VERSION     AX465422.1 GI:21899785
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Mond,J.J., Prince,G. and Klinman,D.M.
  TITLE     Vaccine against RSV
  JOURNAL   Patent: WO 0211761-A 90 14-FEB-2002;
            HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY
            MEDICINE (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic oligonucleotide"
BASE COUNT        3 a      3 c     11 g      3 t
ORIGIN

  Query Match            100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity  100.0%;  Pred. No. 0.17;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
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Db          1 GGTGCATCGATGCAGGGGGG 20


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GenCore version 5.1.6

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Perfect score: 20
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Scoring table: OLIGO_NUC
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Searched: 2552756 seqs, 1349719017 residues

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Post-processing: Listing first 45 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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4	20	100.0	20	22	AAS09588	Immunoreactive CpG
5	20	100.0	20	22	AAS09593	Immunoreactive CpG
6	20	100.0	20	22	AAS09622	Immunoreactive CpG
7	20	100.0	20	22	AAC80612	Immunogenic CpG ol
8	20	100.0	20	22	AAC80614	Immunogenic CpG ol
9	20	100.0	20	22	AAC80617	Immunogenic CpG ol
10	20	100.0	20	22	AAC80618	Immunogenic CpG ol
11	20	100.0	20	22	AAC80623	Immunogenic CpG ol
12	20	100.0	20	22	AAC80652	Immunogenic CpG ol
13	20	100.0	20	24	ABK46460	Immunostimulatory
14	20	100.0	20	24	ABK46462	Immunostimulatory
15	20	100.0	20	24	ABK46465	Immunostimulatory
16	20	100.0	20	24	ABK46466	Immunostimulatory
17	20	100.0	20	24	ABK46471	Immunostimulatory
18	20	100.0	20	24	ABK46500	Immunostimulatory
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20	20	100.0	20	24	ABL35579	Immunostimulatory
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22	20	100.0	22	24	ABL35574	Immunostimulatory
23	20	100.0	22	24	ABL35618	Immunostimulatory
24	20	100.0	28	24	ABL35589	Immunostimulatory
25	20	100.0	28	24	ABL35601	Immunostimulatory
26	20	100.0	29	24	ABL35607	Immunostimulatory
27	20	100.0	30	24	ABL35595	Immunostimulatory
28	20	100.0	30	24	ABL35600	Immunostimulatory
29	20	100.0	32	24	ABL35537	Immunostimulatory
30	19	95.0	19	22	AAS09603	Immunoreactive CpG
31	19	95.0	19	22	AAS09623	Immunoreactive CpG
32	19	95.0	19	22	AAC80633	Immunogenic CpG ol
33	19	95.0	19	22	AAC80653	Immunogenic CpG ol
34	19	95.0	19	24	ABK46481	Immunostimulatory
35	19	95.0	19	24	ABK46501	Immunostimulatory
36	18	90.0	18	24	ABL35577	Immunostimulatory
37	18	90.0	18	24	ABL35587	Immunostimulatory
38	18	90.0	18	24	ABL35625	Immunostimulatory
39	18	90.0	20	24	ABL35576	Immunostimulatory
40	18	90.0	20	24	ABL35586	Immunostimulatory
41	18	90.0	20	24	ABL35620	Immunostimulatory
42	18	90.0	20	24	ABL35624	Immunostimulatory
43	18	90.0	26	24	ABL35598	Immunostimulatory
44	18	90.0	26	24	ABL35610	Immunostimulatory
45	18	90.0	28	24	ABL35597	Immunostimulatory

ALIGNMENTS

RESULT 1
AAS09582
ID AAS09582 standard; DNA; 20 BP.
XX
AC AAS09582;
XX
DT 26-SEP-2001 (first entry)
XX
DE Immunoreactive CpG sequence-containing oligonucleotide #32.
XX
KW CpG sequence; immune response; non-B cell activation; interferon gamma;
KW IFN-gamma; humoral; antibody production; interleukin-6 production;
KW therapeutic; allergy; asthma; cancer; autoimmune disorder; infection;
KW bio-warfare; vaccine; antisense therapy; eczema; allergic rhinitis;
KW coryza; hay fever; urticaria; hives; food allergy; atopic condition;
KW hepatitis; human immunodeficiency virus; HIV; malaria; Francisella;
KW lupus erythematosus; rheumatoid arthritis; multiple sclerosis;
KW schistosomiasis; tuberculosis; acquired immunodeficiency syndrome; AIDS;
KW Leishmania; Ebola; Anthrax; Listeria; ss.
XX
OS Synthetic.
XX
PN WO200151500-A1.
XX
PD 19-JUL-2001.
XX
PF 12-JAN-2001; 2001WO-US01122.
XX
PR 14-JAN-2000; 2000US-0176115.
XX
PA (USSH) US DEPT HEALTH & HUMAN SERVICES.

XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-442129/47.
XX
PT Oligodeoxynucleotides for inducing an immune response to treat and
PT prevent an allergic reaction, cancer, an autoimmune disorder and
PT symptoms resulting from exposure to bio-warfare agents, comprise
PT multiple CpG sequences -
XX
PS Claim 5; Page 32; 48pp; English.
XX
CC AAS09551-AAS09662 represent oligodeoxynucleotides (ODN) of at least 10
CC nucleotides comprising multiple CpG sequences, where one of the CpG
CC sequences is different from another of the multiple CpG sequences.
CC The ODN are useful for inducing an immune response, preferably a cell-
CC mediated immune response, involving non-B cell activation, interferon
CC gamma (IFN-gamma) production or a humoral immune response involving B
CC cell activation, antibody and interleukin-6 production in a host, for
CC treating, preventing or ameliorating an allergic reaction, e.g. asthma,
CC cancer, e.g. solid tumour cancer, a disease associated with the immune
CC system e.g. autoimmune disorder or an immune system deficiency, infection
CC or a symptom resulting from exposure to bio-warfare agent in a human. The
CC induction of immune response improves the efficacy of a vaccine and is
CC used in antisense therapy. The ODN are useful for treating, preventing or
CC ameliorating allergic reactions, including eczema, allergic rhinitis or
CC coryza, hay fever, bronchial asthma, urticaria (hives), food allergies
CC and other atopic conditions, for improving the efficacy of vaccines
CC against hepatitis A, B and C, human immunodeficiency virus (HIV) and
CC malaria, for treating immune system deficiencies, e.g. lupus
CC erythematosus and autoimmune diseases such as rheumatoid arthritis and
CC multiple sclerosis, infections including Francisella, schistosomiasis,
CC tuberculosis, acquired immunodeficiency syndrome (AIDS), Leishmania and
CC symptoms resulting from exposure of bio-warfare agent, including Ebola,
CC Anthrax and Listeria.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

Query Match 100.0%; Score 20; DB 22; Length 20;
Best Local Similarity 100.0%; Pred. No. 0.075;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 2
AAS09584
ID AAS09584 standard; DNA; 20 BP.
XX
AC AAS09584;
XX
DT 26-SEP-2001 (first entry)
XX
DE Immunoreactive CpG sequence-containing oligonucleotide #34.
XX
KW CpG sequence; immune response; non-B cell activation; interferon gamma;
KW IFN-gamma; humoral; antibody production; interleukin-6 production;
KW therapeutic; allergy; asthma; cancer; autoimmune disorder; infection;
KW bio-warfare; vaccine; antisense therapy; eczema; allergic rhinitis;
KW coryza; hay fever; urticaria; hives; food allergy; atopic condition;
KW hepatitis; human immunodeficiency virus; HIV; malaria; Francisella;
KW lupus erythematosus; rheumatoid arthritis; multiple sclerosis;
KW schistosomiasis; tuberculosis; acquired immunodeficiency syndrome; AIDS;
KW Leishmania; Ebola; Anthrax; Listeria; ss.
XX
OS Synthetic.
XX
PN WO200151500-A1.
XX
PD 19-JUL-2001.
XX
PF 12-JAN-2001; 2001WO-US01122.
XX
PR 14-JAN-2000; 2000US-0176115.
XX
PA (USSH) US DEPT HEALTH & HUMAN SERVICES.
XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-442129/47.
XX
PT Oligodeoxynucleotides for inducing an immune response to treat and
PT prevent an allergic reaction, cancer, an autoimmune disorder and
PT symptoms resulting from exposure to bio-warfare agents, comprise
PT multiple CpG sequences -
XX
PS Claim 5; Page 32; 48pp; English.
XX
CC AAS09551-AAS09662 represent oligodeoxynucleotides (ODN) of at least 10
CC nucleotides comprising multiple CpG sequences, where one of the CpG
CC sequences is different from another of the multiple CpG sequences.
CC The ODN are useful for inducing an immune response, preferably a cell-
CC mediated immune response, involving non-B cell activation, interferon
CC gamma (IFN-gamma) production or a humoral immune response involving B
CC cell activation, antibody and interleukin-6 production in a host, for
CC treating, preventing or ameliorating an allergic reaction, e.g. asthma,
CC cancer, e.g. solid tumour cancer, a disease associated with the immune
CC system e.g. autoimmune disorder or an immune system deficiency, infection
CC or a symptom resulting from exposure to bio-warfare agent in a human. The
CC induction of immune response improves the efficacy of a vaccine and is
CC used in antisense therapy. The ODN are useful for treating, preventing or
CC ameliorating allergic reactions, including eczema, allergic rhinitis or
CC coryza, hay fever, bronchial asthma, urticaria (hives), food allergies
CC and other atopic conditions, for improving the efficacy of vaccines
CC against hepatitis A, B and C, human immunodeficiency virus (HIV) and
CC malaria, for treating immune system deficiencies, e.g. lupus
CC erythematosus and autoimmune diseases such as rheumatoid arthritis and
CC multiple sclerosis, infections including Francisella, schistosomiasis,
CC tuberculosis, acquired immunodeficiency syndrome (AIDS), Leishmania and
CC symptoms resulting from exposure of bio-warfare agent, including Ebola,
CC Anthrax and Listeria.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

Query Match 100.0%; Score 20; DB 22; Length 20;
Best Local Similarity 100.0%; Pred. No. 0.075;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 3
AAS09587
ID AAS09587 standard; DNA; 20 BP.
XX
AC AAS09587;
XX
DT 26-SEP-2001 (first entry)
XX
DE Immunoreactive CpG sequence-containing oligonucleotide #37.
XX
KW CpG sequence; immune response; non-B cell activation; interferon gamma;
KW IFN-gamma; humoral; antibody production; interleukin-6 production;
KW therapeutic; allergy; asthma; cancer; autoimmune disorder; infection;
KW bio-warfare; vaccine; antisense therapy; eczema; allergic rhinitis;
KW coryza; hay fever; urticaria; hives; food allergy; atopic condition;
KW hepatitis; human immunodeficiency virus; HIV; malaria; Francisella;
KW lupus erythematosus; rheumatoid arthritis; multiple sclerosis;
KW schistosomiasis; tuberculosis; acquired immunodeficiency syndrome; AIDS;
KW Leishmania; Ebola; Anthrax; Listeria; ss.
XX
OS Synthetic.

XX
PN WO200151500-A1.
XX
PD 19-JUL-2001.
XX
PF 12-JAN-2001; 2001WO-US01122.
XX
PR 14-JAN-2000; 2000US-0176115.
XX
PA (USSH) US DEPT HEALTH & HUMAN SERVICES.
XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-442129/47.
XX
PT Oligodeoxynucleotides for inducing an immune response to treat and
PT prevent an allergic reaction, cancer, an autoimmune disorder and
PT symptoms resulting from exposure to bio-warfare agents, comprise
PT multiple CpG sequences -
XX
PS Claim 5; Page 33; 48pp; English.
XX
CC AAS09551-AAS09662 represent oligodeoxynucleotides (ODN) of at least 10
CC nucleotides comprising multiple CpG sequences, where one of the CpG
CC sequences is different from another of the multiple CpG sequences.
CC The ODN are useful for inducing an immune response, preferably a cell-
CC mediated immune response, involving non-B cell activation, interferon
CC gamma (IFN-gamma) production or a humoral immune response involving B
CC cell activation, antibody and interleukin-6 production in a host, for
CC treating, preventing or ameliorating an allergic reaction, e.g. asthma,
CC cancer, e.g. solid tumour cancer, a disease associated with the immune
CC system e.g. autoimmune disorder or an immune system deficiency, infection
CC or a symptom resulting from exposure to bio-warfare agent in a human. The
CC induction of immune response improves the efficacy of a vaccine and is
CC used in antisense therapy. The ODN are useful for treating, preventing or
CC ameliorating allergic reactions, including eczema, allergic rhinitis or
CC coryza, hay fever, bronchial asthma, urticaria (hives), food allergies
CC and other atopic conditions, for improving the efficacy of vaccines
CC against hepatitis A, B and C, human immunodeficiency virus (HIV) and
CC malaria, for treating immune system deficiencies, e.g. lupus
CC erythematosus and autoimmune diseases such as rheumatoid arthritis and
CC multiple sclerosis, infections including Francisella, schistosomiasis,
CC tuberculosis, acquired immunodeficiency syndrome (AIDS), Leishmania and
CC symptoms resulting from exposure of bio-warfare agent, including Ebola,
CC Anthrax and Listeria.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

Query Match 100.0%; Score 20; DB 22; Length 20;
Best Local Similarity 100.0%; Pred. No. 0.075;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 4
AAS09588
ID AAS09588 standard; DNA; 20 BP.
XX
AC AAS09588;
XX
DT 26-SEP-2001 (first entry)
XX
DE Immunoreactive CpG sequence-containing oligonucleotide #38.
XX
KW CpG sequence; immune response; non-B cell activation; interferon gamma;
KW IFN-gamma; humoral; antibody production; interleukin-6 production;
KW therapeutic; allergy; asthma; cancer; autoimmune disorder; infection;
KW bio-warfare; vaccine; antisense therapy; eczema; allergic rhinitis;
KW coryza; hay fever; urticaria; hives; food allergy; atopic condition;
KW hepatitis; human immunodeficiency virus; HIV; malaria; Francisella;
KW lupus erythematosus; rheumatoid arthritis; multiple sclerosis;
KW schistosomiasis; tuberculosis; acquired immunodeficiency syndrome; AIDS;
KW Leishmania; Ebola; Anthrax; Listeria; ss.
XX
OS Synthetic.
XX
PN WO200151500-A1.
XX
PD 19-JUL-2001.
XX
PF 12-JAN-2001; 2001WO-US01122.
XX
PR 14-JAN-2000; 2000US-0176115.
XX
PA (USSH) US DEPT HEALTH & HUMAN SERVICES.
XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-442129/47.
XX
PT Oligodeoxynucleotides for inducing an immune response to treat and
PT prevent an allergic reaction, cancer, an autoimmune disorder and
PT symptoms resulting from exposure to bio-warfare agents, comprise
PT multiple CpG sequences -
XX
PS Claim 5; Page 33; 48pp; English.
XX
CC AAS09551-AAS09662 represent oligodeoxynucleotides (ODN) of at least 10
CC nucleotides comprising multiple CpG sequences, where one of the CpG
CC sequences is different from another of the multiple CpG sequences.
CC The ODN are useful for inducing an immune response, preferably a cell-
CC mediated immune response, involving non-B cell activation, interferon
CC gamma (IFN-gamma) production or a humoral immune response involving B
CC cell activation, antibody and interleukin-6 production in a host, for
CC treating, preventing or ameliorating an allergic reaction, e.g. asthma,
CC cancer, e.g. solid tumour cancer, a disease associated with the immune
CC system e.g. autoimmune disorder or an immune system deficiency, infection
CC or a symptom resulting from exposure to bio-warfare agent in a human. The
CC induction of immune response improves the efficacy of a vaccine and is
CC used in antisense therapy. The ODN are useful for treating, preventing or
CC ameliorating allergic reactions, including eczema, allergic rhinitis or
CC coryza, hay fever, bronchial asthma, urticaria (hives), food allergies
CC and other atopic conditions, for improving the efficacy of vaccines
CC against hepatitis A, B and C, human immunodeficiency virus (HIV) and
CC malaria, for treating immune system deficiencies, e.g. lupus
CC erythematosus and autoimmune diseases such as rheumatoid arthritis and
CC multiple sclerosis, infections including Francisella, schistosomiasis,
CC tuberculosis, acquired immunodeficiency syndrome (AIDS), Leishmania and
CC symptoms resulting from exposure of bio-warfare agent, including Ebola,
CC Anthrax and Listeria.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

Query Match 100.0%; Score 20; DB 22; Length 20;
Best Local Similarity 100.0%; Pred. No. 0.075;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 5
AAS09593
ID AAS09593 standard; DNA; 20 BP.
XX
AC AAS09593;
XX
DT 26-SEP-2001 (first entry)
XX
DE Immunoreactive CpG sequence-containing oligonucleotide #43.
XX
KW CpG sequence; immune response; non-B cell activation; interferon gamma;

```
KW   IFN-gamma; humoral; antibody production; interleukin-6 production;
KW   therapeutic; allergy; asthma; cancer; autoimmune disorder; infection;
KW   bio-warfare; vaccine; antisense therapy; eczema; allergic rhinitis;
KW   coryza; hay fever; urticaria; hives; food allergy; atopic condition;
KW   hepatitis; human immunodeficiency virus; HIV; malaria; Francisella;
KW   lupus erythematosus; rheumatoid arthritis; multiple sclerosis;
KW   schistosomiasis; tuberculosis; acquired immunodeficiency syndrome; AIDS;
KW   Leishmania; Ebola; Anthrax; Listeria; ss.
XX
OS   Synthetic.
XX
PN   WO200151500-A1.
XX
PD   19-JUL-2001.
XX
PF   12-JAN-2001; 2001WO-US01122.
XX
PR   14-JAN-2000; 2000US-0176115.
XX
PA   (USSH ) US DEPT HEALTH & HUMAN SERVICES.
XX
PI   Klinman D,  Ishii K,  Verthelyi D;
XX
DR   WPI; 2001-442129/47.
XX
PT   Oligodeoxynucleotides for inducing an immune response to treat and
PT   prevent an allergic reaction, cancer, an autoimmune disorder and
PT   symptoms resulting from exposure to bio-warfare agents, comprise
PT   multiple CpG sequences  -
XX
PS   Claim 5; Page 34; 48pp; English.
XX
CC   AAS09551-AAS09662 represent oligodeoxynucleotides (ODN) of at least 10
CC   nucleotides comprising multiple CpG sequences, where one of the CpG
CC   sequences is different from another of the multiple CpG sequences.
CC   The ODN are useful for inducing an immune response, preferably a cell-
CC   mediated immune response, involving non-B cell activation, interferon
CC   gamma (IFN-gamma) production or a humoral immune response involving B
CC   cell activation, antibody and interleukin-6 production in a host, for
CC   treating, preventing or ameliorating an allergic reaction, e.g. asthma,
CC   cancer, e.g. solid tumour cancer, a disease associated with the immune
CC   system e.g. autoimmune disorder or an immune system deficiency, infection
CC   or a symptom resulting from exposure to bio-warfare agent in a human. The
CC   induction of immune response improves the efficacy of a vaccine and is
CC   used in antisense therapy. The ODN are useful for treating, preventing or
CC   ameliorating allergic reactions, including eczema, allergic rhinitis or
CC   coryza, hay fever, bronchial asthma, urticaria (hives), food allergies
CC   and other atopic conditions, for improving the efficacy of vaccines
CC   against hepatitis A, B and C, human immunodeficiency virus (HIV) and
CC   malaria, for treating immune system deficiencies, e.g. lupus
CC   erythematosus and autoimmune diseases such as rheumatoid arthritis and
CC   multiple sclerosis, infections including Francisella, schistosomiasis,
CC   tuberculosis, acquired immunodeficiency syndrome (AIDS), Leishmania and
CC   symptoms resulting from exposure of bio-warfare agent, including Ebola,
CC   Anthrax and Listeria.
XX
SQ   Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

  Query Match             100.0%;  Score 20;  DB 22;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 0.075;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 6
AAS09622
ID   AAS09622 standard; DNA; 20 BP.
XX
AC   AAS09622;
XX
DT   26-SEP-2001  (first entry)
XX
DE   Immunoreactive CpG sequence-containing oligonucleotide #72.
XX
KW   CpG sequence; immune response; non-B cell activation; interferon gamma;
KW   IFN-gamma; humoral; antibody production; interleukin-6 production;
KW   therapeutic; allergy; asthma; cancer; autoimmune disorder; infection;
KW   bio-warfare; vaccine; antisense therapy; eczema; allergic rhinitis;
KW   coryza; hay fever; urticaria; hives; food allergy; atopic condition;
KW   hepatitis; human immunodeficiency virus; HIV; malaria; Francisella;
KW   lupus erythematosus; rheumatoid arthritis; multiple sclerosis;
KW   schistosomiasis; tuberculosis; acquired immunodeficiency syndrome; AIDS;
KW   Leishmania; Ebola; Anthrax; Listeria; ss.
XX
OS   Synthetic.
XX
PN   WO200151500-A1.
XX
PD   19-JUL-2001.
XX
PF   12-JAN-2001; 2001WO-US01122.
XX
PR   14-JAN-2000; 2000US-0176115.
XX
PA   (USSH ) US DEPT HEALTH & HUMAN SERVICES.
XX
PI   Klinman D,  Ishii K,  Verthelyi D;
XX
DR   WPI; 2001-442129/47.
XX
PT   Oligodeoxynucleotides for inducing an immune response to treat and
PT   prevent an allergic reaction, cancer, an autoimmune disorder and
PT   symptoms resulting from exposure to bio-warfare agents, comprise
PT   multiple CpG sequences  -
XX
PS   Claim 5; Page 39; 48pp; English.
XX
CC   AAS09551-AAS09662 represent oligodeoxynucleotides (ODN) of at least 10
CC   nucleotides comprising multiple CpG sequences, where one of the CpG
CC   sequences is different from another of the multiple CpG sequences.
CC   The ODN are useful for inducing an immune response, preferably a cell-
CC   mediated immune response, involving non-B cell activation, interferon
CC   gamma (IFN-gamma) production or a humoral immune response involving B
CC   cell activation, antibody and interleukin-6 production in a host, for
CC   treating, preventing or ameliorating an allergic reaction, e.g. asthma,
CC   cancer, e.g. solid tumour cancer, a disease associated with the immune
CC   system e.g. autoimmune disorder or an immune system deficiency, infection
CC   or a symptom resulting from exposure to bio-warfare agent in a human. The
CC   induction of immune response improves the efficacy of a vaccine and is
CC   used in antisense therapy. The ODN are useful for treating, preventing or
CC   ameliorating allergic reactions, including eczema, allergic rhinitis or
CC   coryza, hay fever, bronchial asthma, urticaria (hives), food allergies
CC   and other atopic conditions, for improving the efficacy of vaccines
CC   against hepatitis A, B and C, human immunodeficiency virus (HIV) and
CC   malaria, for treating immune system deficiencies, e.g. lupus
CC   erythematosus and autoimmune diseases such as rheumatoid arthritis and
CC   multiple sclerosis, infections including Francisella, schistosomiasis,
CC   tuberculosis, acquired immunodeficiency syndrome (AIDS), Leishmania and
CC   symptoms resulting from exposure of bio-warfare agent, including Ebola,
CC   Anthrax and Listeria.
XX
SQ   Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

  Query Match             100.0%;  Score 20;  DB 22;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 0.075;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 7
```

AAC80612
ID AAC80612 standard; DNA; 20 BP.
XX
AC AAC80612;
XX
DT 14-FEB-2001 (first entry)
XX
DE Immunogenic CpG oligodeoxynucleotide, SEQ ID NO:32.
XX
KW CpG oligodeoxynucleotide; unmethylated; antigen-presenting cell;
KW immunogenic; cytokine release; natural killer cell; NK cell activation;
KW cell-mediated immune response; T-cell response; humoral response;
KW B-cell response; antibody production; immune response induction;
KW vaccine; allergy; asthma; infection; bacterial; viral; fungal; protozoal;
KW parasitic; tuberculosis; AIDS; autoimmune disease; lupus erythematosus;
KW rheumatoid arthritis; multiple sclerosis; solid tumour; cancer;
KW immune deficiency; biological warfare agent; cytostatic; antiarthritic;
KW antimicrobial; antiallergic; protozoacide; tuberculostatic;
KW antiasthmatic; dermatological; phosphorothioate; ss.
XX
OS Synthetic.
XX
PN WO200061151-A2.
XX
PD 19-OCT-2000.
XX
PF 12-APR-2000; 2000WO-US09839.
XX
PR 12-APR-1999; 99US-0128898.
XX
PA (KLIN/) KLINMAN D.
PA (ISHI/) ISHII K.
PA (VERT/) VERTHELYI D.
XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-006880/01.
XX
PT Novel oligonucleotides useful for the prevention and treatment of
PT allergies, cancer, and autoimmune disorders and for ameliorating
PT symptoms resulting from exposure to a bio-warfare agent -
XX
PS Claim 4; Page 29; 46pp; English.
XX
CC The invention relates to novel immunogenic CpG oligodeoxynucleotides
CC (AAC80581-C80723). The oligonucleotide are at least 10 bases long
CC and comprise one of the generic sequences 5'-NNNT-CpG-WNNN-3' or
CC 5'-RY-CpG-RY-3'. The central CpG motif is unmethylated, and the
CC oligonucleotides optionally have phosphorothioate linkages which make
CC them more resistant to degradation. The invention also relates to an
CC oligonucleotide delivery complex comprising an oligonucleotide of the
CC invention and a targetting agent, and a pharmaceutical composition
CC comprising the oligonucleotide delivery complex. The oligonucleotides
CC are able to induce either a cell-mediated (T-cell) response or a humoral
CC (B-cell, antibody) response, with oligonucleotides of the sequence
CC 5'-RY-CpG-RY-3' being able to induce a cell-mediated response, and those
CC of the sequence 5'-NNNT-CpG-WNNN-3' being able to induce a humoral
CC response. It is thought that after administration, the oligonucleotide
CC acts on antigen-presenting cells (e.g., macrophages and dendritic
CC cells), which then release cytokines, leading to activation of natural
CC killer (NK) cells. A cell-mediated or humoral response can then occur by
CC activation of T- or B-cells. The induction of an immune response is
CC useful for treating, preventing or ameliorating an allergic reaction
CC (preferably asthma), or an infection, where an immunogenic CpG
CC oligonucleotide is administered either alone or in combination with an
CC anti-allergenic agent or anti-infectious agent. The allergic conditions
CC which may be treated include eczema, allergic rhinitis, hayfever,
CC urticaria, food allergies and other atopic conditions, and the
CC infections which may be treated include viral, bacterial, fungal and
CC protozoal infections such as tuberculosis, AIDS, leishmania and
CC schistosomiasis. Immune response induction may also be used in the
CC treatment of an autoimmune disorder (e.g., lupus erythematosus,
CC rheumatoid arthritis and multiple sclerosis), a disease associated with
CC immune system deficiency, and symptoms resulting from exposure to an
CC agent of biological warfare. An immunogenic CpG oligonucleotide, either
CC alone or in combination with an anti-cancer agent, is useful for treating
CC solid tumour cancer. The induction of an immune response is used in
CC antisense therapy and to improve the efficacy of a vaccine. The
CC oligonucleotide is preferably administered to lymphocytes ex vivo,
CC producing activated lymphocytes which are then administered to the host.
CC The present sequence represents an immunogenic CpG oligodeoxynucleotide
CC of the invention.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

Query Match 100.0%; Score 20; DB 22; Length 20;
Best Local Similarity 100.0%; Pred. No. 0.075;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 8
AAC80614
ID AAC80614 standard; DNA; 20 BP.
XX
AC AAC80614;
XX
DT 14-FEB-2001 (first entry)
XX
DE Immunogenic CpG oligodeoxynucleotide, SEQ ID NO:34.
XX
KW CpG oligodeoxynucleotide; unmethylated; antigen-presenting cell;
KW immunogenic; cytokine release; natural killer cell; NK cell activation;
KW cell-mediated immune response; T-cell response; humoral response;
KW B-cell response; antibody production; immune response induction;
KW vaccine; allergy; asthma; infection; bacterial; viral; fungal; protozoal;
KW parasitic; tuberculosis; AIDS; autoimmune disease; lupus erythematosus;
KW rheumatoid arthritis; multiple sclerosis; solid tumour; cancer;
KW immune deficiency; biological warfare agent; cytostatic; antiarthritic;
KW antimicrobial; antiallergic; protozoacide; tuberculostatic;
KW antiasthmatic; dermatological; phosphorothioate; ss.
XX
OS Synthetic.
XX
PN WO200061151-A2.
XX
PD 19-OCT-2000.
XX
PF 12-APR-2000; 2000WO-US09839.
XX
PR 12-APR-1999; 99US-0128898.
XX
PA (KLIN/) KLINMAN D.
PA (ISHI/) ISHII K.
PA (VERT/) VERTHELYI D.
XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-006880/01.
XX
PT Novel oligonucleotides useful for the prevention and treatment of
PT allergies, cancer, and autoimmune disorders and for ameliorating
PT symptoms resulting from exposure to a bio-warfare agent -
XX
PS Claim 4; Page 29; 46pp; English.
XX
CC The invention relates to novel immunogenic CpG oligodeoxynucleotides
CC (AAC80581-C80723). The oligonucleotide are at least 10 bases long
CC and comprise one of the generic sequences 5'-NNNT-CpG-WNNN-3' or
CC 5'-RY-CpG-RY-3'. The central CpG motif is unmethylated, and the
CC oligonucleotides optionally have phosphorothioate linkages which make
CC them more resistant to degradation. The invention also relates to an
CC oligonucleotide delivery complex comprising an oligonucleotide of the

CC invention and a targetting agent, and a pharmaceutical composition
CC comprising the oligonucleotide delivery complex. The oligonucleotides
CC are able to induce either a cell-mediated (T-cell) response or a humoral
CC (B-cell, antibody) response, with oligonucleotides of the sequence
CC 5'-RY-CpG-RY-3' being able to induce a cell-mediated response, and those
CC of the sequence 5'-NNNT-CpG-WNNN-3' being able to induce a humoral
CC response. It is thought that after administration, the oligonucleotide
CC acts on antigen-presenting cells (e.g., macrophages and dendritic
CC cells), which then release cytokines, leading to activation of natural
CC killer (NK) cells. A cell-mediated or humoral response can then occur by
CC activation of T- or B-cells. The induction of an immune response is
CC useful for treating, preventing or ameliorating an allergic reaction
CC (preferably asthma), or an infection, where an immunogenic CpG
CC oligonucleotide is administered either alone or in combination with an
CC anti-allergenic agent or anti-infectious agent. The allergic conditions
CC which may be treated include eczema, allergic rhinitis, hayfever,
CC urticaria, food allergies and other atopic conditions, and the
CC infections which may be treated include viral, bacterial, fungal and
CC protozoal infections such as tuberculosis, AIDS, leishmania and
CC schistosomiasis. Immune response induction may also be used in the
CC treatment of an autoimmune disorder (e.g., lupus erythematosus,
CC rheumatoid arthritis and multiple sclerosis), a disease associated with
CC immune system deficiency, and symptoms resulting from exposure to an
CC agent of biological warfare. An immunogenic CpG oligonucleotide, either
CC alone or in combination with an anti-cancer agent, is useful for treating
CC solid tumour cancer. The induction of an immune response is used in
CC antisense therapy and to improve the efficacy of a vaccine. The
CC oligonucleotide is preferably administered to lymphocytes ex vivo,
CC producing activated lymphocytes which are then administered to the host.
CC The present sequence represents an immunogenic CpG oligodeoxynucleotide
CC of the invention.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

Query Match 100.0%; Score 20; DB 22; Length 20;
Best Local Similarity 100.0%; Pred. No. 0.075;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 9
AAC80617
ID AAC80617 standard; DNA; 20 BP.
XX
AC AAC80617;
XX
DT 14-FEB-2001 (first entry)
XX
DE Immunogenic CpG oligodeoxynucleotide, SEQ ID NO:37.
XX
KW CpG oligodeoxynucleotide; unmethylated; antigen-presenting cell;
KW immunogenic; cytokine release; natural killer cell; NK cell activation;
KW cell-mediated immune response; T-cell response; humoral response;
KW B-cell response; antibody production; immune response induction;
KW vaccine; allergy; asthma; infection; bacterial; viral; fungal; protozoal;
KW parasitic; tuberculosis; AIDS; autoimmune disease; lupus erythematosus;
KW rheumatoid arthritis; multiple sclerosis; solid tumour; cancer;
KW immune deficiency; biological warfare agent; cytostatic; antiarthritic;
KW antimicrobial; antiallergic; protozoacide; tuberculostatic;
KW antiasthmatic; dermatological; phosphorothioate; ss.
XX
OS Synthetic.
XX
PN WO200061151-A2.
XX
PD 19-OCT-2000.
XX
PF 12-APR-2000; 2000WO-US09839.
XX
PR 12-APR-1999; 99US-0128898.
XX
PA (KLIN/) KLINMAN D.
PA (ISHI/) ISHII K.
PA (VERT/) VERTHELYI D.
XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-006880/01.
XX
PT Novel oligonucleotides useful for the prevention and treatment of
PT allergies, cancer, and autoimmune disorders and for ameliorating
PT symptoms resulting from exposure to a bio-warfare agent -
XX
PS Claim 4; Page 29; 46pp; English.
XX
CC The invention relates to novel immunogenic CpG oligodeoxynucleotides
CC (AAC80581-C80723). The oligonucleotide are at least 10 bases long
CC and comprise one of the generic sequences 5'-NNNT-CpG-WNNN-3' or
CC 5'-RY-CpG-RY-3'. The central CpG motif is unmethylated, and the
CC oligonucleotides optionally have phosphorothioate linkages which make
CC them more resistant to degradation. The invention also relates to an
CC oligonucleotide delivery complex comprising an oligonucleotide of the
CC invention and a targetting agent, and a pharmaceutical composition
CC comprising the oligonucleotide delivery complex. The oligonucleotides
CC are able to induce either a cell-mediated (T-cell) response or a humoral
CC (B-cell, antibody) response, with oligonucleotides of the sequence
CC 5'-RY-CpG-RY-3' being able to induce a cell-mediated response, and those
CC of the sequence 5'-NNNT-CpG-WNNN-3' being able to induce a humoral
CC response. It is thought that after administration, the oligonucleotide
CC acts on antigen-presenting cells (e.g., macrophages and dendritic
CC cells), which then release cytokines, leading to activation of natural
CC killer (NK) cells. A cell-mediated or humoral response can then occur by
CC activation of T- or B-cells. The induction of an immune response is
CC useful for treating, preventing or ameliorating an allergic reaction
CC (preferably asthma), or an infection, where an immunogenic CpG
CC oligonucleotide is administered either alone or in combination with an
CC anti-allergenic agent or anti-infectious agent. The allergic conditions
CC which may be treated include eczema, allergic rhinitis, hayfever,
CC urticaria, food allergies and other atopic conditions, and the
CC infections which may be treated include viral, bacterial, fungal and
CC protozoal infections such as tuberculosis, AIDS, leishmania and
CC schistosomiasis. Immune response induction may also be used in the
CC treatment of an autoimmune disorder (e.g., lupus erythematosus,
CC rheumatoid arthritis and multiple sclerosis), a disease associated with
CC immune system deficiency, and symptoms resulting from exposure to an
CC agent of biological warfare. An immunogenic CpG oligonucleotide, either
CC alone or in combination with an anti-cancer agent, is useful for treating
CC solid tumour cancer. The induction of an immune response is used in
CC antisense therapy and to improve the efficacy of a vaccine. The
CC oligonucleotide is preferably administered to lymphocytes ex vivo,
CC producing activated lymphocytes which are then administered to the host.
CC The present sequence represents an immunogenic CpG oligodeoxynucleotide
CC of the invention.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

Query Match 100.0%; Score 20; DB 22; Length 20;
Best Local Similarity 100.0%; Pred. No. 0.075;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 10
AAC80618
ID AAC80618 standard; DNA; 20 BP.
XX
AC AAC80618;
XX
DT 14-FEB-2001 (first entry)
XX

DE Immunogenic CpG oligodeoxynucleotide, SEQ ID NO:38.
XX
KW CpG oligodeoxynucleotide; unmethylated; antigen-presenting cell;
KW immunogenic; cytokine release; natural killer cell; NK cell activation;
KW cell-mediated immune response; T-cell response; humoral response;
KW B-cell response; antibody production; immune response induction;
KW vaccine; allergy; asthma; infection; bacterial; viral; fungal; protozoal;
KW parasitic; tuberculosis; AIDS; autoimmune disease; lupus erythematosus;
KW rheumatoid arthritis; multiple sclerosis; solid tumour; cancer;
KW immune deficiency; biological warfare agent; cytostatic; antiarthritic;
KW antimicrobial; antiallergic; protozoacide; tuberculostatic;
KW antiasthmatic; dermatological; phosphorothioate; ss.
XX
OS Synthetic.
XX
PN WO200061151-A2.
XX
PD 19-OCT-2000.
XX
PF 12-APR-2000; 2000WO-US09839.
XX
PR 12-APR-1999; 99US-0128898.
XX
PA (KLIN/) KLINMAN D.
PA (ISHI/) ISHII K.
PA (VERT/) VERTHELYI D.
XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-006880/01.
XX
PT Novel oligonucleotides useful for the prevention and treatment of
PT allergies, cancer, and autoimmune disorders and for ameliorating
PT symptoms resulting from exposure to a bio-warfare agent -
XX
PS Claim 4; Page 30; 46pp; English.
XX
CC The invention relates to novel immunogenic CpG oligodeoxynucleotides
CC (AAC80581-C80723). The oligonucleotide are at least 10 bases long
CC and comprise one of the generic sequences 5'-NNNT-CpG-WNNN-3' or
CC 5'-RY-CpG-RY-3'. The central CpG motif is unmethylated, and the
CC oligonucleotides optionally have phosphorothioate linkages which make
CC them more resistant to degradation. The invention also relates to an
CC oligonucleotide delivery complex comprising an oligonucleotide of the
CC invention and a targetting agent, and a pharmaceutical composition
CC comprising the oligonucleotide delivery complex. The oligonucleotides
CC are able to induce either a cell-mediated (T-cell) response or a humoral
CC (B-cell, antibody) response, with oligonucleotides of the sequence
CC 5'-RY-CpG-RY-3' being able to induce a cell-mediated response, and those
CC of the sequence 5'-NNNT-CpG-WNNN-3' being able to induce a humoral
CC response. It is thought that after administration, the oligonucleotide
CC acts on antigen-presenting cells (e.g., macrophages and dendritic
CC cells), which then release cytokines, leading to activation of natural
CC killer (NK) cells. A cell-mediated or humoral response can then occur by
CC activation of T- or B-cells. The induction of an immune response is
CC useful for treating, preventing or ameliorating an allergic reaction
CC (preferably asthma), or an infection, where an immunogenic CpG
CC oligonucleotide is administered either alone or in combination with an
CC anti-allergenic agent or anti-infectious agent. The allergic conditions
CC which may be treated include eczema, allergic rhinitis, hayfever,
CC urticaria, food allergies and other atopic conditions, and the
CC infections which may be treated include viral, bacterial, fungal and
CC protozoal infections such as tuberculosis, AIDS, leishmania and
CC schistosomiasis. Immune response induction may also be used in the
CC treatment of an autoimmune disorder (e.g., lupus erythematosus,
CC rheumatoid arthritis and multiple sclerosis), a disease associated with
CC immune system deficiency, and symptoms resulting from exposure to an
CC agent of biological warfare. An immunogenic CpG oligonucleotide, either
CC alone or in combination with an anti-cancer agent, is useful for treating
CC solid tumour cancer. The induction of an immune response is used in
CC antisense therapy and to improve the efficacy of a vaccine. The
CC oligonucleotide is preferably administered to lymphocytes ex vivo,
CC producing activated lymphocytes which are then administered to the host.
CC The present sequence represents an immunogenic CpG oligodeoxynucleotide
CC of the invention.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

Query Match 100.0%; Score 20; DB 22; Length 20;
Best Local Similarity 100.0%; Pred. No. 0.075;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 11
AAC80623
ID AAC80623 standard; DNA; 20 BP.
XX
AC AAC80623;
XX
DT 14-FEB-2001 (first entry)
XX
DE Immunogenic CpG oligodeoxynucleotide, SEQ ID NO:43.
XX
KW CpG oligodeoxynucleotide; unmethylated; antigen-presenting cell;
KW immunogenic; cytokine release; natural killer cell; NK cell activation;
KW cell-mediated immune response; T-cell response; humoral response;
KW B-cell response; antibody production; immune response induction;
KW vaccine; allergy; asthma; infection; bacterial; viral; fungal; protozoal;
KW parasitic; tuberculosis; AIDS; autoimmune disease; lupus erythematosus;
KW rheumatoid arthritis; multiple sclerosis; solid tumour; cancer;
KW immune deficiency; biological warfare agent; cytostatic; antiarthritic;
KW antimicrobial; antiallergic; protozoacide; tuberculostatic;
KW antiasthmatic; dermatological; phosphorothioate; ss.
XX
OS Synthetic.
XX
PN WO200061151-A2.
XX
PD 19-OCT-2000.
XX
PF 12-APR-2000; 2000WO-US09839.
XX
PR 12-APR-1999; 99US-0128898.
XX
PA (KLIN/) KLINMAN D.
PA (ISHI/) ISHII K.
PA (VERT/) VERTHELYI D.
XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-006880/01.
XX
PT Novel oligonucleotides useful for the prevention and treatment of
PT allergies, cancer, and autoimmune disorders and for ameliorating
PT symptoms resulting from exposure to a bio-warfare agent -
XX
PS Claim 4; Page 30; 46pp; English.
XX
CC The invention relates to novel immunogenic CpG oligodeoxynucleotides
CC (AAC80581-C80723). The oligonucleotide are at least 10 bases long
CC and comprise one of the generic sequences 5'-NNNT-CpG-WNNN-3' or
CC 5'-RY-CpG-RY-3'. The central CpG motif is unmethylated, and the
CC oligonucleotides optionally have phosphorothioate linkages which make
CC them more resistant to degradation. The invention also relates to an
CC oligonucleotide delivery complex comprising an oligonucleotide of the
CC invention and a targetting agent, and a pharmaceutical composition
CC comprising the oligonucleotide delivery complex. The oligonucleotides
CC are able to induce either a cell-mediated (T-cell) response or a humoral
CC (B-cell, antibody) response, with oligonucleotides of the sequence
CC 5'-RY-CpG-RY-3' being able to induce a cell-mediated response, and those
CC of the sequence 5'-NNNT-CpG-WNNN-3' being able to induce a humoral
CC response. It is thought that after administration, the oligonucleotide

```
CC   acts on antigen-presenting cells (e.g., macrophages and dendritic
CC   cells), which then release cytokines, leading to activation of natural
CC   killer (NK) cells. A cell-mediated or humoral response can then occur by
CC   activation of T- or B-cells. The induction of an immune response is
CC   useful for treating, preventing or ameliorating an allergic reaction
CC   (preferably asthma), or an infection, where an immunogenic CpG
CC   oligonucleotide is administered either alone or in combination with an
CC   anti-allergenic agent or anti-infectious agent. The allergic conditions
CC   which may be treated include eczema, allergic rhinitis, hayfever,
CC   urticaria, food allergies and other atopic conditions, and the
CC   infections which may be treated include viral, bacterial, fungal and
CC   protozoal infections such as tuberculosis, AIDS, leishmania and
CC   schistosomiasis. Immune response induction may also be used in the
CC   treatment of an autoimmune disorder (e.g., lupus erythematosus,
CC   rheumatoid arthritis and multiple sclerosis), a disease associated with
CC   immune system deficiency, and symptoms resulting from exposure to an
CC   agent of biological warfare. An immunogenic CpG oligonucleotide, either
CC   alone or in combination with an anti-cancer agent, is useful for treating
CC   solid tumour cancer. The induction of an immune response is used in
CC   antisense therapy and to improve the efficacy of a vaccine. The
CC   oligonucleotide is preferably administered to lymphocytes ex vivo,
CC   producing activated lymphocytes which are then administered to the host.
CC   The present sequence represents an immunogenic CpG oligodeoxynucleotide
CC   of the invention.
XX
SQ   Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

  Query Match             100.0%;  Score 20;  DB 22;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 0.075;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 12
AAC80652
ID   AAC80652 standard; DNA; 20 BP.
XX
AC   AAC80652;
XX
DT   14-FEB-2001  (first entry)
XX
DE   Immunogenic CpG oligodeoxynucleotide, SEQ ID NO:72.
XX
KW   CpG oligodeoxynucleotide; unmethylated; antigen-presenting cell;
KW   immunogenic; cytokine release; natural killer cell; NK cell activation;
KW   cell-mediated immune response; T-cell response; humoral response;
KW   B-cell response; antibody production; immune response induction;
KW   vaccine; allergy; asthma; infection; bacterial; viral; fungal; protozoal;
KW   parasitic; tuberculosis; AIDS; autoimmune disease; lupus erythematosus;
KW   rheumatoid arthritis; multiple sclerosis; solid tumour; cancer;
KW   immune deficiency; biological warfare agent; cytostatic; antiarthritic;
KW   antimicrobial; antiallergic; protozoacide; tuberculostatic;
KW   antiasthmatic; dermatological; phosphorothioate; ss.
XX
OS   Synthetic.
XX
PN   WO200061151-A2.
XX
PD   19-OCT-2000.
XX
PF   12-APR-2000; 2000WO-US09839.
XX
PR   12-APR-1999;   99US-0128898.
XX
PA   (KLIN/) KLINMAN D.
PA   (ISHI/) ISHII K.
PA   (VERT/) VERTHELYI D.
XX
PI   Klinman D,  Ishii K,  Verthelyi D;
XX
DR   WPI; 2001-006880/01.
XX
PT   Novel oligonucleotides useful for the prevention and treatment of
PT   allergies, cancer, and autoimmune disorders and for ameliorating
PT   symptoms resulting from exposure to a bio-warfare agent  -
XX
PS   Claim 4; Page 35; 46pp; English.
XX
CC   The invention relates to novel immunogenic CpG oligodeoxynucleotides
CC   (AAC80581-C80723). The oligonucleotide are at least 10 bases long
CC   and comprise one of the generic sequences 5'-NNNT-CpG-WNNN-3' or
CC   5'-RY-CpG-RY-3'. The central CpG motif is unmethylated, and the
CC   oligonucleotides optionally have phosphorothioate linkages which make
CC   them more resistant to degradation. The invention also relates to an
CC   oligonucleotide delivery complex comprising an oligonucleotide of the
CC   invention and a targetting agent, and a pharmaceutical composition
CC   comprising the oligonucleotide delivery complex. The oligonucleotides
CC   are able to induce either a cell-mediated (T-cell) response or a humoral
CC   (B-cell, antibody) response, with oligonucleotides of the sequence
CC   5'-RY-CpG-RY-3' being able to induce a cell-mediated response, and those
CC   of the sequence 5'-NNNT-CpG-WNNN-3' being able to induce a humoral
CC   response. It is thought that after administration, the oligonucleotide
CC   acts on antigen-presenting cells (e.g., macrophages and dendritic
CC   cells), which then release cytokines, leading to activation of natural
CC   killer (NK) cells. A cell-mediated or humoral response can then occur by
CC   activation of T- or B-cells. The induction of an immune response is
CC   useful for treating, preventing or ameliorating an allergic reaction
CC   (preferably asthma), or an infection, where an immunogenic CpG
CC   oligonucleotide is administered either alone or in combination with an
CC   anti-allergenic agent or anti-infectious agent. The allergic conditions
CC   which may be treated include eczema, allergic rhinitis, hayfever,
CC   urticaria, food allergies and other atopic conditions, and the
CC   infections which may be treated include viral, bacterial, fungal and
CC   protozoal infections such as tuberculosis, AIDS, leishmania and
CC   schistosomiasis. Immune response induction may also be used in the
CC   treatment of an autoimmune disorder (e.g., lupus erythematosus,
CC   rheumatoid arthritis and multiple sclerosis), a disease associated with
CC   immune system deficiency, and symptoms resulting from exposure to an
CC   agent of biological warfare. An immunogenic CpG oligonucleotide, either
CC   alone or in combination with an anti-cancer agent, is useful for treating
CC   solid tumour cancer. The induction of an immune response is used in
CC   antisense therapy and to improve the efficacy of a vaccine. The
CC   oligonucleotide is preferably administered to lymphocytes ex vivo,
CC   producing activated lymphocytes which are then administered to the host.
CC   The present sequence represents an immunogenic CpG oligodeoxynucleotide
CC   of the invention.
XX
SQ   Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

  Query Match             100.0%;  Score 20;  DB 22;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 0.075;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 13
ABK46460
ID   ABK46460 standard; DNA; 20 BP.
XX
AC   ABK46460;
XX
DT   05-JUN-2002  (first entry)
XX
DE   Immunostimulatory unmethylated CpG oligodideoxynucleotide #50.
XX
KW   unmethylated CpG; oligdideoxynucleotide; ODN; virucide; vaccine;
KW   Paramyxoviridae; F protein; respiratory syncytial virus; RSV;
KW   viral bronchiolitis; pneumonia; infectious pulmonary disease;
KW   bronchopulmonary dysplasia; congenital heart condition; ss.
XX
```

OS Synthetic.
XX
PN WO200211761-A2.
XX
PD 14-FEB-2002.
XX
PF 09-AUG-2001; 2001WO-US41633.
XX
PR 10-AUG-2000; 2000US-224011P.
PR 01-SEP-2000; 2000US-229307P.
XX
PA (JACK-) JACKSON FOUND ADVANCEMENT MILITARY MED.
XX
PI Mond JJ, Prince G, Klinman DM;
XX
DR WPI; 2002-227118/28.
XX
PT Vaccine for immunising patient against respiratory syncytial virus, has
PT epitopes of Paramyxoviridae F protein, and cytosine followed by guanine
PT linked by phosphate bond-oligodideoxynucleotides -
XX
PS Claim 4; Page 8; 30pp; English.
XX
CC The invention describes a vaccine comprising one or more epitopes of a
CC Paramyxoviridae F protein, and one or more CpG (cytosine followed by
CC guanine linked by phosphate bond)-oligodideoxynucleotides (ODNs). The
CC vaccine is useful for vaccinating a patient especially against viruses
CC of the Paramyxoviridae family e.g. respiratory syncytial virus (RSV),
CC the primary cause of viral bronchiolitis and pneumonia in infants and
CC children, and infectious pulmonary disease in infants. RSV has been
CC particularly implicated in death of infants that are premature, have
CC bronchopulmonary dysplasia, or congenital heart conditions. This
CC sequence represents an oligodideoxynucleotide that can be used in the
CC creation of the vaccine.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

Query Match 100.0%; Score 20; DB 24; Length 20;
Best Local Similarity 100.0%; Pred. No. 0.075;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 14
ABK46462
ID ABK46462 standard; DNA; 20 BP.
XX
AC ABK46462;
XX
DT 05-JUN-2002 (first entry)
XX
DE Immunostimulatory unmethylated CpG oligodideoxynucleotide #52.
XX
KW unmethylated CpG; oligdideoxynucleotide; ODN; virucide; vaccine;
KW Paramyxoviridae; F protein; respiratory syncytial virus; RSV;
KW viral bronchiolitis; pneumonia; infectious pulmonary disease;
KW bronchopulmonary dysplasia; congenital heart condition; ss.
XX
OS Synthetic.
XX
PN WO200211761-A2.
XX
PD 14-FEB-2002.
XX
PF 09-AUG-2001; 2001WO-US41633.
XX
PR 10-AUG-2000; 2000US-224011P.
PR 01-SEP-2000; 2000US-229307P.
XX
PA (JACK-) JACKSON FOUND ADVANCEMENT MILITARY MED.
XX
PI Mond JJ, Prince G, Klinman DM;
XX
DR WPI; 2002-227118/28.
XX
PT Vaccine for immunising patient against respiratory syncytial virus, has
PT epitopes of Paramyxoviridae F protein, and cytosine followed by guanine
PT linked by phosphate bond-oligodideoxynucleotides -
XX
PS Claim 4; Page 8; 30pp; English.
XX
CC The invention describes a vaccine comprising one or more epitopes of a
CC Paramyxoviridae F protein, and one or more CpG (cytosine followed by
CC guanine linked by phosphate bond)-oligodideoxynucleotides (ODNs). The
CC vaccine is useful for vaccinating a patient especially against viruses
CC of the Paramyxoviridae family e.g. respiratory syncytial virus (RSV),
CC the primary cause of viral bronchiolitis and pneumonia in infants and
CC children, and infectious pulmonary disease in infants. RSV has been
CC particularly implicated in death of infants that are premature, have
CC bronchopulmonary dysplasia, or congenital heart conditions. This
CC sequence represents an oligodideoxynucleotide that can be used in the
CC creation of the vaccine.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

Query Match 100.0%; Score 20; DB 24; Length 20;
Best Local Similarity 100.0%; Pred. No. 0.075;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 15
ABK46465
ID ABK46465 standard; DNA; 20 BP.
XX
AC ABK46465;
XX
DT 05-JUN-2002 (first entry)
XX
DE Immunostimulatory unmethylated CpG oligodideoxynucleotide #55.
XX
KW unmethylated CpG; oligdideoxynucleotide; ODN; virucide; vaccine;
KW Paramyxoviridae; F protein; respiratory syncytial virus; RSV;
KW viral bronchiolitis; pneumonia; infectious pulmonary disease;
KW bronchopulmonary dysplasia; congenital heart condition; ss.
XX
OS Synthetic.
XX
PN WO200211761-A2.
XX
PD 14-FEB-2002.
XX
PF 09-AUG-2001; 2001WO-US41633.
XX
PR 10-AUG-2000; 2000US-224011P.
PR 01-SEP-2000; 2000US-229307P.
XX
PA (JACK-) JACKSON FOUND ADVANCEMENT MILITARY MED.
XX
PI Mond JJ, Prince G, Klinman DM;
XX
DR WPI; 2002-227118/28.
XX
PT Vaccine for immunising patient against respiratory syncytial virus, has
PT epitopes of Paramyxoviridae F protein, and cytosine followed by guanine
PT linked by phosphate bond-oligodideoxynucleotides -
XX
PS Claim 4; Page 8; 30pp; English.
XX
CC The invention describes a vaccine comprising one or more epitopes of a

CC Paramyxoviridae F protein, and one or more CpG (cytosine followed by
CC guanine linked by phosphate bond)-oligodideoxynucleotides (ODNs). The
CC vaccine is useful for vaccinating a patient especially against viruses
CC of the Paramyxoviridae family e.g. respiratory syncytial virus (RSV),
CC the primary cause of viral bronchiolitis and pneumonia in infants and
CC children, and infectious pulmonary disease in infants. RSV has been
CC particularly implicated in death of infants that are premature, have
CC bronchopulmonary dysplasia, or congenital heart conditions. This
CC sequence represents an oligodideoxynucleotide that can be used in the
CC creation of the vaccine.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

Query Match 100.0%; Score 20; DB 24; Length 20;
Best Local Similarity 100.0%; Pred. No. 0.075;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20
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Search completed: January 20, 2004, 18:51:34
Job time : 123.235 secs

GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: January 20, 2004, 18:44:59 ; Search time 132.941 Seconds
(without alignments)
530.274 Million cell updates/sec

Title: US-10-068-160-1
Perfect score: 20
Sequence: 1 ggtgcatcgatgcaggggggg 20

Scoring table: OLIGO_NUC
Gapop 60.0 , Gapext 60.0

Searched: 2324096 seqs, 1762381658 residues

Word size : 0

Total number of hits satisfying chosen parameters: 2392556

Minimum DB seq length: 0
Maximum DB seq length: 500

Post-processing: Listing first 45 summaries

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16: /cgn2_6/ptodata/1/pubpna/US10_NEW_PUB.seq:*
17: /cgn2_6/ptodata/1/pubpna/US60_NEW_PUB.seq:*
18: /cgn2_6/ptodata/1/pubpna/US60_PUBCOMB.seq:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	20	100.0	20	13	US-10-194-035-32	Sequence 32, Appl
2	20	100.0	20	13	US-10-194-035-34	Sequence 34, Appl
3	20	100.0	20	13	US-10-194-035-37	Sequence 37, Appl
4	20	100.0	20	13	US-10-194-035-38	Sequence 38, Appl
5	20	100.0	20	13	US-10-194-035-43	Sequence 43, Appl
6	20	100.0	20	13	US-10-194-035-72	Sequence 72, Appl
7	20	100.0	20	15	US-10-068-160-1	Sequence 1, Appli
8	20	100.0	20	15	US-10-068-160-54	Sequence 54, Appl
9	19	95.0	19	13	US-10-194-035-53	Sequence 53, Appl
10	19	95.0	19	13	US-10-194-035-73	Sequence 73, Appl
11	18	90.0	18	15	US-10-068-160-12	Sequence 12, Appl
12	18	90.0	20	15	US-10-068-160-38	Sequence 38, Appl
13	17	85.0	17	13	US-10-194-035-27	Sequence 27, Appl
14	16	80.0	16	13	US-10-194-035-71	Sequence 71, Appl
15	15	75.0	20	15	US-10-068-160-65	Sequence 65, Appl
16	14	70.0	18	15	US-10-068-160-16	Sequence 16, Appl
17	14	70.0	20	13	US-10-194-035-40	Sequence 40, Appl
18	14	70.0	20	13	US-10-194-035-81	Sequence 81, Appl
19	14	70.0	20	13	US-10-194-035-82	Sequence 82, Appl
20	14	70.0	20	13	US-10-194-035-102	Sequence 102, App
21	14	70.0	20	15	US-10-068-160-7	Sequence 7, Appli
22	14	70.0	20	15	US-10-068-160-26	Sequence 26, Appl
c 23	14	70.0	20	15	US-10-068-160-38	Sequence 38, Appl
24	14	70.0	20	15	US-10-068-160-44	Sequence 44, Appl
25	14	70.0	20	15	US-10-068-160-49	Sequence 49, Appl
26	14	70.0	50	10	US-09-978-295A-294	Sequence 294, App
27	14	70.0	50	10	US-09-978-697-294	Sequence 294, App
28	14	70.0	50	10	US-09-978-192A-294	Sequence 294, App
29	14	70.0	50	10	US-09-999-832A-294	Sequence 294, App
30	14	70.0	50	11	US-09-978-189-294	Sequence 294, App
31	14	70.0	50	11	US-09-978-608A-294	Sequence 294, App
32	14	70.0	50	11	US-09-978-585A-294	Sequence 294, App
33	14	70.0	50	11	US-09-978-191A-294	Sequence 294, App
34	14	70.0	50	11	US-09-978-403A-294	Sequence 294, App
35	14	70.0	50	11	US-09-978-564A-294	Sequence 294, App
36	14	70.0	50	11	US-09-999-833A-294	Sequence 294, App
37	14	70.0	50	11	US-09-981-915A-294	Sequence 294, App
38	14	70.0	50	11	US-09-978-824-294	Sequence 294, App
39	14	70.0	50	11	US-09-918-585A-294	Sequence 294, App
40	14	70.0	50	11	US-09-978-423A-294	Sequence 294, App
41	14	70.0	50	11	US-09-978-193A-294	Sequence 294, App
42	14	70.0	50	11	US-09-999-830A-294	Sequence 294, App
43	14	70.0	50	11	US-09-978-757A-294	Sequence 294, App
44	14	70.0	50	11	US-09-978-187B-294	Sequence 294, App
45	14	70.0	50	11	US-09-978-643A-294	Sequence 294, App

ALIGNMENTS

RESULT 1
US-10-194-035-32
; Sequence 32, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
; APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
; APPLICANT: SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
; APPLICANT: KLINMAN, Dennis
; APPLICANT: ISHII, Ken
; APPLICANT: VERTHELYI, Daniela
; TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
; FILE REFERENCE: 4239-63317
; CURRENT APPLICATION NUMBER: US/10/194,035
; CURRENT FILING DATE: 2002-07-12
; PRIOR APPLICATION NUMBER: PCT/US01/01122
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: US 60/176,115
; PRIOR FILING DATE: 2000-01-14
; NUMBER OF SEQ ID NOS: 119
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 32
; LENGTH: 20
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-32

Query Match 100.0%; Score 20; DB 13; Length 20;
Best Local Similarity 100.0%; Pred. No. 0.036;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 2

US-10-194-035-34
; Sequence 34, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
; APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
; APPLICANT: SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
; APPLICANT: KLINMAN, Dennis
; APPLICANT: ISHII, Ken
; APPLICANT: VERTHELYI, Daniela
; TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
; FILE REFERENCE: 4239-63317
; CURRENT APPLICATION NUMBER: US/10/194,035
; CURRENT FILING DATE: 2002-07-12
; PRIOR APPLICATION NUMBER: PCT/US01/01122
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: US 60/176,115
; PRIOR FILING DATE: 2000-01-14
; NUMBER OF SEQ ID NOS: 119
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 34
; LENGTH: 20
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-34

Query Match 100.0%; Score 20; DB 13; Length 20;
Best Local Similarity 100.0%; Pred. No. 0.036;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 3
US-10-194-035-37
; Sequence 37, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
; APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
; APPLICANT: SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
; APPLICANT: KLINMAN, Dennis
; APPLICANT: ISHII, Ken
; APPLICANT: VERTHELYI, Daniela
; TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
; FILE REFERENCE: 4239-63317
; CURRENT APPLICATION NUMBER: US/10/194,035
; CURRENT FILING DATE: 2002-07-12
; PRIOR APPLICATION NUMBER: PCT/US01/01122
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: US 60/176,115
; PRIOR FILING DATE: 2000-01-14
; NUMBER OF SEQ ID NOS: 119
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 37
; LENGTH: 20
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-37

Query Match 100.0%; Score 20; DB 13; Length 20;
Best Local Similarity 100.0%; Pred. No. 0.036;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 4
US-10-194-035-38
; Sequence 38, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
; APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
; APPLICANT: SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
; APPLICANT: KLINMAN, Dennis
; APPLICANT: ISHII, Ken
; APPLICANT: VERTHELYI, Daniela
; TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
; FILE REFERENCE: 4239-63317
; CURRENT APPLICATION NUMBER: US/10/194,035
; CURRENT FILING DATE: 2002-07-12
; PRIOR APPLICATION NUMBER: PCT/US01/01122
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: US 60/176,115
; PRIOR FILING DATE: 2000-01-14
; NUMBER OF SEQ ID NOS: 119
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 38
; LENGTH: 20
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-38

Query Match 100.0%; Score 20; DB 13; Length 20;
Best Local Similarity 100.0%; Pred. No. 0.036;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 5
US-10-194-035-43
; Sequence 43, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
; APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
; APPLICANT: SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
; APPLICANT: KLINMAN, Dennis
; APPLICANT: ISHII, Ken
; APPLICANT: VERTHELYI, Daniela
; TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
; FILE REFERENCE: 4239-63317
; CURRENT APPLICATION NUMBER: US/10/194,035
; CURRENT FILING DATE: 2002-07-12
; PRIOR APPLICATION NUMBER: PCT/US01/01122
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: US 60/176,115
; PRIOR FILING DATE: 2000-01-14
; NUMBER OF SEQ ID NOS: 119
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 43
; LENGTH: 20
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-43

Query Match 100.0%; Score 20; DB 13; Length 20;
Best Local Similarity 100.0%; Pred. No. 0.036;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 6
US-10-194-035-72
; Sequence 72, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
; APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
; APPLICANT: SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
; APPLICANT: KLINMAN, Dennis
; APPLICANT: ISHII, Ken
; APPLICANT: VERTHELYI, Daniela
; TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
; FILE REFERENCE: 4239-63317
; CURRENT APPLICATION NUMBER: US/10/194,035
; CURRENT FILING DATE: 2002-07-12
; PRIOR APPLICATION NUMBER: PCT/US01/01122
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: US 60/176,115
; PRIOR FILING DATE: 2000-01-14
; NUMBER OF SEQ ID NOS: 119
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 72
; LENGTH: 20
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-72

Query Match 100.0%; Score 20; DB 13; Length 20;
Best Local Similarity 100.0%; Pred. No. 0.036;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 7
US-10-068-160-1
; Sequence 1, Application US/10068160
; Publication No. US20030060440A1
; GENERAL INFORMATION:
; APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA, REPRESENTED BY THE
; APPLICANT: SECRETARY, DEPARTMENT OF HEALTH AND HUMAN SERVICES
; APPLICANT: KLINMAN, Dennis
; APPLICANT: ISHII, Ken
; APPLICANT: VERTHELYI, Daniela
; TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
; FILE REFERENCE: 4239-61999
; CURRENT APPLICATION NUMBER: US/10/068,160
; CURRENT FILING DATE: 2002-02-06
; PRIOR APPLICATION NUMBER: 60/128,898
; PRIOR FILING DATE: 1999-04-12
; NUMBER OF SEQ ID NOS: 120
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 1
; LENGTH: 20
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Oligonucleotide
US-10-068-160-1

Query Match 100.0%; Score 20; DB 15; Length 20;
Best Local Similarity 100.0%; Pred. No. 0.036;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 8
US-10-068-160-54
; Sequence 54, Application US/10068160
; Publication No. US20030060440A1
; GENERAL INFORMATION:
; APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA, REPRESENTED BY THE
; APPLICANT: SECRETARY, DEPARTMENT OF HEALTH AND HUMAN SERVICES
; APPLICANT: KLINMAN, Dennis
; APPLICANT: ISHII, Ken
; APPLICANT: VERTHELYI, Daniela
; TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
; FILE REFERENCE: 4239-61999
; CURRENT APPLICATION NUMBER: US/10/068,160
; CURRENT FILING DATE: 2002-02-06
; PRIOR APPLICATION NUMBER: 60/128,898
; PRIOR FILING DATE: 1999-04-12
; NUMBER OF SEQ ID NOS: 120
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 54
; LENGTH: 20
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Oligonucleotide
US-10-068-160-54

Query Match 100.0%; Score 20; DB 15; Length 20;
Best Local Similarity 100.0%; Pred. No. 0.036;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 9
US-10-194-035-53
; Sequence 53, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
; APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
; APPLICANT: SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
; APPLICANT: KLINMAN, Dennis
; APPLICANT: ISHII, Ken
; APPLICANT: VERTHELYI, Daniela
; TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
; FILE REFERENCE: 4239-63317
; CURRENT APPLICATION NUMBER: US/10/194,035
; CURRENT FILING DATE: 2002-07-12
; PRIOR APPLICATION NUMBER: PCT/US01/01122
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: US 60/176,115
; PRIOR FILING DATE: 2000-01-14
; NUMBER OF SEQ ID NOS: 119
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 53
; LENGTH: 19
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-53

Query Match 95.0%; Score 19; DB 13; Length 19;
Best Local Similarity 100.0%; Pred. No. 0.14;
Matches 19; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGG 19
|||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGG 19

RESULT 10

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US-10-194-035-73
; Sequence 73, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
;  APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
;  APPLICANT:  SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
;  APPLICANT:  KLINMAN, Dennis
;  APPLICANT:  ISHII, Ken
;  APPLICANT:  VERTHELYI, Daniela
;  TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
;  FILE REFERENCE: 4239-63317
;  CURRENT APPLICATION NUMBER: US/10/194,035
;  CURRENT FILING DATE:  2002-07-12
;  PRIOR APPLICATION NUMBER: PCT/US01/01122
;  PRIOR FILING DATE: 2001-07-19
;  PRIOR APPLICATION NUMBER: US 60/176,115
;  PRIOR FILING DATE: 2000-01-14
;  NUMBER OF SEQ ID NOS: 119
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 73
;   LENGTH: 19
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-73

  Query Match             95.0%;  Score 19;  DB 13;  Length 19;
  Best Local Similarity   100.0%;  Pred. No. 0.14;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGG 19
              |||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGG 19


RESULT 11
US-10-068-160-12
; Sequence 12, Application US/10068160
; Publication No. US20030060440A1
; GENERAL INFORMATION:
;  APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA, REPRESENTED BY THE
;  APPLICANT:  SECRETARY, DEPARTMENT OF HEALTH AND HUMAN SERVICES
;  APPLICANT:  KLINMAN, Dennis
;  APPLICANT:  ISHII, Ken
;  APPLICANT:  VERTHELYI, Daniela
;  TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
;  FILE REFERENCE: 4239-61999
;  CURRENT APPLICATION NUMBER: US/10/068,160
;  CURRENT FILING DATE:  2002-02-06
;  PRIOR APPLICATION NUMBER: 60/128,898
;  PRIOR FILING DATE: 1999-04-12
;  NUMBER OF SEQ ID NOS: 120
;  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 12
;   LENGTH: 18
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Oligonucleotide
US-10-068-160-12

  Query Match             90.0%;  Score 18;  DB 15;  Length 18;
  Best Local Similarity   100.0%;  Pred. No. 0.51;
  Matches   18;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          3 TGCATCGATGCAGGGGGG 20
              ||||||||||||||||||
Db          1 TGCATCGATGCAGGGGGG 18


RESULT 12
US-10-068-160-38
; Sequence 38, Application US/10068160
; Publication No. US20030060440A1
; GENERAL INFORMATION:
;  APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA, REPRESENTED BY THE
;  APPLICANT:  SECRETARY, DEPARTMENT OF HEALTH AND HUMAN SERVICES
;  APPLICANT:  KLINMAN, Dennis
;  APPLICANT:  ISHII, Ken
;  APPLICANT:  VERTHELYI, Daniela
;  TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
;  FILE REFERENCE: 4239-61999
;  CURRENT APPLICATION NUMBER: US/10/068,160
;  CURRENT FILING DATE:  2002-02-06
;  PRIOR APPLICATION NUMBER: 60/128,898
;  PRIOR FILING DATE: 1999-04-12
;  NUMBER OF SEQ ID NOS: 120
;  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 38
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Oligonucleotide
US-10-068-160-38

  Query Match             90.0%;  Score 18;  DB 15;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 0.51;
  Matches   18;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          3 TGCATCGATGCAGGGGGG 20
              ||||||||||||||||||
Db          3 TGCATCGATGCAGGGGGG 20


RESULT 13
US-10-194-035-27
; Sequence 27, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
;  APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
;  APPLICANT:  SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
;  APPLICANT:  KLINMAN, Dennis
;  APPLICANT:  ISHII, Ken
;  APPLICANT:  VERTHELYI, Daniela
;  TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
;  FILE REFERENCE: 4239-63317
;  CURRENT APPLICATION NUMBER: US/10/194,035
;  CURRENT FILING DATE:  2002-07-12
;  PRIOR APPLICATION NUMBER: PCT/US01/01122
;  PRIOR FILING DATE: 2001-07-19
;  PRIOR APPLICATION NUMBER: US 60/176,115
;  PRIOR FILING DATE: 2000-01-14
;  NUMBER OF SEQ ID NOS: 119
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 27
;   LENGTH: 17
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-27

  Query Match             85.0%;  Score 17;  DB 13;  Length 17;
  Best Local Similarity   100.0%;  Pred. No. 1.9;
  Matches   17;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGG 17
              |||||||||||||||||
Db          1 GGTGCATCGATGCAGGG 17


RESULT 14
US-10-194-035-71
; Sequence 71, Application US/10194035
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; Publication No. US20030144229A1
; GENERAL INFORMATION:
; APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
; APPLICANT: SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
; APPLICANT: KLINMAN, Dennis
; APPLICANT: ISHII, Ken
; APPLICANT: VERTHELYI, Daniela
; TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
; FILE REFERENCE: 4239-63317
; CURRENT APPLICATION NUMBER: US/10/194,035
; CURRENT FILING DATE: 2002-07-12
; PRIOR APPLICATION NUMBER: PCT/US01/01122
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: US 60/176,115
; PRIOR FILING DATE: 2000-01-14
; NUMBER OF SEQ ID NOS: 119
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 71
; LENGTH: 16
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-71

Query Match 80.0%; Score 16; DB 13; Length 16;
Best Local Similarity 100.0%; Pred. No. 7.4;
Matches 16; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGG 16
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Db 1 GGTGCATCGATGCAGG 16

RESULT 15
US-10-068-160-65
; Sequence 65, Application US/10068160
; Publication No. US20030060440A1
; GENERAL INFORMATION:
; APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA, REPRESENTED BY THE
; APPLICANT: SECRETARY, DEPARTMENT OF HEALTH AND HUMAN SERVICES
; APPLICANT: KLINMAN, Dennis
; APPLICANT: ISHII, Ken
; APPLICANT: VERTHELYI, Daniela
; TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
; FILE REFERENCE: 4239-61999
; CURRENT APPLICATION NUMBER: US/10/068,160
; CURRENT FILING DATE: 2002-02-06
; PRIOR APPLICATION NUMBER: 60/128,898
; PRIOR FILING DATE: 1999-04-12
; NUMBER OF SEQ ID NOS: 120
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 65
; LENGTH: 20
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Oligonucleotide
US-10-068-160-65

Query Match 75.0%; Score 15; DB 15; Length 20;
Best Local Similarity 100.0%; Pred. No. 27;
Matches 15; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 6 ATCGATGCAGGGGGG 20
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Db 6 ATCGATGCAGGGGGG 20

Search completed: January 20, 2004, 20:51:01
Job time : 133.941 secs

GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: January 20, 2004, 17:17:18 ; Search time 1226.76 Seconds
(without alignments)
396.237 Million cell updates/sec

Title: US-10-068-160-1
Perfect score: 20
Sequence: 1 ggtgcatcgatgcaggggggg 20

Scoring table: OLIGO_NUC
Gapop 60.0 , Gapext 60.0

Searched: 22781392 seqs, 12152238056 residues

Word size : 0

Total number of hits satisfying chosen parameters: 21849362

Minimum DB seq length: 0
Maximum DB seq length: 500

Post-processing: Listing first 45 summaries

Database : EST:*
1: em_estba:*
2: em_esthum:*
3: em_estin:*
4: em_estmu:*
5: em_estov:*
6: em_estpl:*
7: em_estro:*
8: em_htc:*
9: gb_est1:*
10: gb_est2:*
11: gb_htc:*
12: gb_est3:*
13: gb_est4:*
14: gb_est5:*
15: em_estfun:*
16: em_estom:*
17: em_gss_hum:*
18: em_gss_inv:*
19: em_gss_pln:*
20: em_gss_vrt:*
21: em_gss_fun:*
22: em_gss_mam:*
23: em_gss_mus:*
24: em_gss_pro:*
25: em_gss_rod:*
26: em_gss_phg:*
27: em_gss_vrl:*
28: gb_gss1:*
29: gb_gss2:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.		Score	% Query Match	Length	DB	ID	Description
1		15	75.0	177	12	BJ193666	BJ193666 BJ193666
2	c	15	75.0	210	13	BQ703645	BQ703645 EST672 al
3	c	15	75.0	211	14	CA854145	CA854145 EST1175 a
4		15	75.0	374	14	CB966250	CB966250 NL34_G07
5	c	14	70.0	113	28	BH861949	BH861949 SALK_0883
6		14	70.0	207	13	BQ380106	BQ380106 RC1-UT001
7		14	70.0	249	9	AV993468	AV993468 AV993468
8	c	14	70.0	249	28	BH220641	BH220641 1006096A0
9		14	70.0	285	2	HSM073336	Bx483168 Homo sapi
10		14	70.0	292	12	BM856929	BM856929 K-EST0141
11	c	14	70.0	306	13	BW097424	BW097424 BW097424
12		14	70.0	329	9	AW415097	AW415097 49143 MAR
13	c	14	70.0	352	28	BH019162	BH019162 L242k.d_H
14		14	70.0	360	9	AA066330	AA066330 mm14e06.r
15		14	70.0	363	14	CB391692	CB391692 OSTF156H5
16		14	70.0	365	9	AA930446	AA930446 vs59g06.r
17		14	70.0	365	14	CA654361	CA654361 wreln.pk1
18		14	70.0	375	13	BW238122	BW238122 BW238122
19		14	70.0	397	9	AW145716	AW145716 ga33h05.y
20		14	70.0	399	12	BG815202	BG815202 dac02d03.
21		14	70.0	407	9	AA223768	AA223768 zr10a06.r
22	c	14	70.0	415	9	AI036275	AI036275 vl83f10.r
23	c	14	70.0	424	28	AQ214130	AQ214130 HS_2187_B
24	c	14	70.0	425	10	BF293321	BF293321 WHE2155_C
25	c	14	70.0	434	28	AQ927254	AQ927254 RPCI-23-2
26	c	14	70.0	442	14	CA706144	CA706144 wdk1c.pk0
27	c	14	70.0	477	28	BH605338	BH605338 BOHHS53TF
28		14	70.0	484	29	CC059869	CC059869 ii36a09.b
29		14	70.0	486	10	BE026564	BE026564 db28c05.x
30		14	70.0	487	13	BW220988	BW220988 BW220988
31		14	70.0	489	12	BM785652	BM785652 K-EST0064
32		14	70.0	489	13	BQ102588	BQ102588 MINm172 M
33	c	14	70.0	493	29	CC354887	CC354887 PUHNQ64TB
34		14	70.0	494	14	W79399	W79399 zd81c01.r1
35		14	70.0	496	9	AU129448	AU129448 AU129448
36	c	14	70.0	498	13	BU003989	BU003989 QGG37C11.
37		13	65.0	91	9	AA853766	AA853766 NHTBCae08
38		13	65.0	142	9	AU077261	AU077261 AU077261
39		13	65.0	166	12	BM447256	BM447256 DSA008A01
40	c	13	65.0	181	9	AA749807	AA749807 ISAS0074
41		13	65.0	185	14	CB038739	CB038739 Tc_ad2_49
42		13	65.0	194	14	CB038491	CB038491 Tc_ad2_46
43		13	65.0	220	14	CB037470	CB037470 Tc_ad2_34
44		13	65.0	223	12	BM704378	BM704378 UI-E-CI1-
45		13	65.0	230	29	BZ674942	BZ674942 PUBHU18TD

ALIGNMENTS

RESULT 1
BJ193666
LOCUS BJ193666 177 bp mRNA linear EST 24-JAN-2002
DEFINITION BJ193666 normalized full length cDNA library, chloronemata, caulonemata and rhizoid-like protonemata Physcomitrella patens subsp. patens cDNA clone pphn19j13 5', mRNA sequence.
ACCESSION BJ193666
VERSION BJ193666.1 GI:18361600
KEYWORDS EST.
SOURCE Physcomitrella patens subsp. patens
ORGANISM Physcomitrella patens subsp. patens
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Bryophyta; Bryopsida; Funariidae; Funariales; Funariaceae; Physcomitrella.
REFERENCE 1 (bases 1 to 177)
AUTHORS Fujita,T., Shin-i,T., Seki,M., Kamiya,A., Uchiyama,I., Nishiyama,T., Carninci,P., Hayashizaki,Y., Shinozaki,K., Kohara,Y. and Hasebe,M.
TITLE Comparison of the moss Physcomitrella patens genome with flowering plants genome
JOURNAL Unpublished
COMMENT Contact: Tadasu Shin-i
Center For Genetic Resource Information
National Institute of Genetics
1111 Yata, Mishima, Shizuoka 411-8540, Japan
Tel: 81-559-81-6856
Fax: 81-559-81-6855
Email: tshini@genes.nig.ac.jp

A backbone of the vector is pBluescript II, that was in vivo excised from a modified lPS phage vector (Mo bi Tec, Germany). XhoI digested-5' end of cDNA is ligated to SalI site of the vector, and the BamHI digested-3' end including poly-A tail is ligated to BamHI site of the vector. cDNA instert could be amplified with conventional T7 and T3 primers. This normarized full- length cDNA library was generated basically according to the method described in Genome Research 10, 1617-1630 (2000), Carninci, P. et al. Protonemata were blended by the POLYTRON, and then cultivated on the BCD medium containing luM NAA (naphthalene acetic acid) for 8 to 11 days under the continuous light.

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FEATURES             Location/Qualifiers
     source          1. .177
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                     /mol_type="mRNA"
                     /sub_species="patens"
                     /db_xref="taxon:145481"
                     /clone="pphn19j13"
                     /tissue_type="mixture of chloronemata, caulonemata and
                     rhizoid-like protonemata"
                     /clone_lib="normalized full length cDNA library,
                     chloronemata, caulonemata and rhizoid-like protonemata"
BASE COUNT       31 a     31 c     58 g     57 t
ORIGIN

  Query Match             75.0%;  Score 15;  DB 12;  Length 177;
  Best Local Similarity   100.0%;  Pred. No. 6.5e+02;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          6 ATCGATGCAGGGGGG 20
              |||||||||||||||
Db        154 ATCGATGCAGGGGGG 168


RESULT 2
BQ703645/c
LOCUS       BQ703645                210 bp    mRNA    linear   EST 01-MAY-2003
DEFINITION  EST672 almond cDNA library Prunus dulcis cDNA 5', mRNA sequence.
ACCESSION   BQ703645
VERSION     BQ703645.1  GI:30271226
KEYWORDS    EST.
SOURCE      Prunus dulcis (almond)
  ORGANISM  Prunus dulcis
            Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
            Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; rosids
            ; eurosids I; Rosales; Rosaceae; Amygdaloideae; Prunus.
REFERENCE   1  (bases 1 to 210)
  AUTHORS   Jiang,Y.Q. and Ma,R.C.
  TITLE     Generation and Analysis of 814 Expressed Sequence Tags from Almond
            (Prunus dulcis) Pistils
  JOURNAL   Unpublished (2002)
COMMENT     Contact: Jiang YQ, Ma RC
            Lab of Plant Functional Genomics
            Beijing Agro-biotechnology Research Center
            Banjing Cun, No.301, Haidian Dis., Beijing 100089, P.R. China
            Tel: 8610 5150 3831
            Fax: 8610 5150 3980
            Email: rcma1@yahoo.com
            Insert Length: 210   Std Error: 0.00
            Seq primer: M13/pUC reverse primer
            POLYA=Yes.
FEATURES             Location/Qualifiers
     source          1. .210
                     /organism="Prunus dulcis"
                     /mol_type="mRNA"
                     /db_xref="taxon:3755"
                     /tissue_type="pistils"
                     /clone_lib="almond cDNA library"
                     /note="Organ: flower; Vector: pZL1; Site_1: Sal I; Site_2:
                     Not I; Total RNAs were isolated from pistils using Trizol
                     reagent (Invitrogen, USA). Then, polyA+ mRNA was isolated
                     using oligo(dT) cellulose as described. cDNA was
                     synthesized using a lambda-zipLox cDNA synthesis kit(CAT
                     No.19643-014, Invitrogen, USA). The phage library was
                     converted through mass excision to a plasmid library in
                     the vector pZL1. The plasmid library was plated on 15-cm
                     LB agar plates with 100ug/mL ampicillin. Individual clones
                     were picked at random and propagated. The 5'ends of the
                     cDNA clones were sequenced on ABI Prism377 DNA sequencer."
BASE COUNT       80 a     29 c     39 g     62 t
ORIGIN

  Query Match             75.0%;  Score 15;  DB 13;  Length 210;
  Best Local Similarity   100.0%;  Pred. No. 6.5e+02;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          3 TGCATCGATGCAGGG 17
              |||||||||||||||
Db        119 TGCATCGATGCAGGG 105


RESULT 3
CA854145/c
LOCUS       CA854145                211 bp    mRNA    linear   EST 01-MAY-2003
DEFINITION  EST1175 almond cDNA library Prunus dulcis cDNA 5', mRNA sequence.
ACCESSION   CA854145
VERSION     CA854145.1  GI:30271704
KEYWORDS    EST.
SOURCE      Prunus dulcis (almond)
  ORGANISM  Prunus dulcis
            Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
            Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; rosids
            ; eurosids I; Rosales; Rosaceae; Amygdaloideae; Prunus.
REFERENCE   1  (bases 1 to 211)
  AUTHORS   Jiang,Y.Q. and Ma,R.C.
  TITLE     Generation and Analysis of Expressed Sequence Tags from Almond
            (Prunus dulcis) Pistils
  JOURNAL   Unpublished
COMMENT     Contact: Jiang YQ, Ma RC
            Lab of Plant Functional Genomics
            Beijing Agro-biotechnology Research Center
            Banjing Cun, No.301, Haidian Dis., Beijing 100089, P.R. China
            Tel: 8610 5150 3831
            Fax: 8610 5150 3980
            Email: rcma1@yahoo.com
            Insert Length: 211   Std Error: 0.00
            Seq primer: M13/pUC reverse primer
            POLYA=Yes.
FEATURES             Location/Qualifiers
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                     /organism="Prunus dulcis"
                     /mol_type="mRNA"
                     /db_xref="taxon:3755"
                     /tissue_type="pistils"
                     /clone_lib="almond cDNA library"
                     /note="Organ: flower; Vector: pZL1; Site_1: Sal I; Site_2:
                     Not I; Total RNAs were isolated from pistils using Trizol
                     reagent (Invitrogen, USA). Then, polyA+ mRNA was isolated
                     using oligo(dT) cellulose as described. cDNA was
                     synthesized using a lambda-zipLox cDNA synthesis kit(CAT
                     No.19643-014, Invitrogen, USA). The phage library was
                     converted through mass excision to a plasmid library in
                     the vector pZL1. The plasmid library was plated on 15-cm
                     LB agar plates with 100ug/mL ampicillin. Individual clones
                     were picked at random and propagated. The 5'ends of the
                     cDNA clones were sequenced on ABI Prism377 DNA sequencer."
BASE COUNT       81 a     29 c     39 g     62 t
ORIGIN

  Query Match             75.0%;  Score 15;  DB 14;  Length 211;
  Best Local Similarity   100.0%;  Pred. No. 6.5e+02;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          3 TGCATCGATGCAGGG 17
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Db        119 TGCATCGATGCAGGG 105
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```
RESULT 4
CB966250
LOCUS       CB966250                374 bp    mRNA    linear   EST 29-APR-2003
DEFINITION  NL34_G07 Drought stress (leaf) Oryza sativa (indica cultivar-group)
            cDNA clone NL34_G07 3', mRNA sequence.
ACCESSION   CB966250
VERSION     CB966250.1  GI:30228359
KEYWORDS    EST.
SOURCE      Oryza sativa (indica cultivar-group)
  ORGANISM  Oryza sativa (indica cultivar-group)
            Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
            Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
            Ehrhartoideae; Oryzeae; Oryza.
REFERENCE   1  (bases 1 to 374)
  AUTHORS   Markandeya,G., Ravindra Babu,P., Venkat Reddy,B., Nagabhushana,I.,
            Chandra Sekhar,A., Bennetzen,J.L., Ramakrishna,W. and Reddy,A.R.
  TITLE     ESTs from a normalized cDNA library of drought stressed rice
            seedlings (Oryza sativa L.cv Nagina 22)
  JOURNAL   Unpublished
COMMENT     Contact: Reddy AR
            Department of Plant Sciences, School of Life Sciences
            University of Hyderabad
            P.O. Central University, Hyderabad-500 046, A.P, India
            Tel: 0091-40-3010265
            Fax: 0091-40-3010145
            Email: arjulsl@uohyd.ernet.in
            Insert Length: 374   Std Error: 0.00
            Seq primer: CGCCAGGGTTTTCCCAGTCACGAC.
FEATURES             Location/Qualifiers
     source          1. .374
                     /organism="Oryza sativa (indica cultivar-group)"
                     /mol_type="mRNA"
                     /cultivar="Nagina 22 (indica sub sp)"
                     /db_xref="taxon:39946"
                     /clone="NL34_G07"
                     /tissue_type="Entire leaf tissue"
                     /dev_stage="35 day-old seedlings"
                     /clone_lib="Drought stress (leaf)"
                     /note="Organ: Leaf; Vector: T7T3Pac; ESTs from normalized
                     leaf cDNA Library from drought stressed seedlings "
BASE COUNT      106 a    113 c     82 g     73 t
ORIGIN

  Query Match           75.0%;  Score 15;  DB 14;  Length 374;
  Best Local Similarity  100.0%;  Pred. No. 6.4e+02;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 GTGCATCGATGCAGG 16
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Db        335 GTGCATCGATGCAGG 349


RESULT 5
BH861949/c
LOCUS       BH861949                113 bp    DNA     linear   GSS 05-AUG-2002
DEFINITION  SALK_088338 Arabidopsis thaliana TDNA insertion lines Arabidopsis
            thaliana genomic clone SALK_088338, genomic survey sequence.
ACCESSION   BH861949
VERSION     BH861949.1  GI:22097275
KEYWORDS    GSS.
SOURCE      Arabidopsis thaliana (thale cress)
  ORGANISM  Arabidopsis thaliana
            Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
            Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; rosids
            ; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
REFERENCE   1  (bases 1 to 113)
  AUTHORS   Alonso,J.M., Leisse,T.J., Barajas,P., Chen,H., Cheuk,R., Gadrinab
            ,C., Jeske,A., Karnes,M., Kim,C.J., Parker,H., Prednis,L., Shinn,P.
            , Zimmerman,J. and Ecker,J.R.
  TITLE     A Sequence-Indexed Library of Insertion Mutations in the
            Arabidopsis Genome
  JOURNAL   Unpublished
COMMENT     Contact: Joseph R. Ecker
            Salk Institute Genomic Analysis Laboratory (SIGnAL)
            The Salk Institute for Biological Studies
            10010 N. Torrey Pines Road, La Jolla, CA 92037, USA
            Tel: 858 453 4100 x1752
            Fax: 858 558 6379
            Email: ecker@salk.edu
            This is single pass sequence recovered from the left border of
            TDNA. This sequence lies within an annotated intron of At2g42880.
            Class: TDNA tagged.
FEATURES             Location/Qualifiers
     source          1. .113
                     /organism="Arabidopsis thaliana"
                     /mol_type="genomic DNA"
                     /strain="Columbia 0"
                     /db_xref="taxon:3702"
                     /clone="SALK_088338"
                     /clone_lib="Arabidopsis thaliana TDNA insertion lines"
                     /note="PCR was performed on Arabidopsis thaliana lines
                     each of which contains  one or more TDNA insertion
                     elements. The resultant fragment for each  line was
                     directly sequenced to determine the genomic sequence at
                     the  site of insertion. Details of the protocols used can
                     be found at  http://signal.salk.edu/tdna_protocols.html"
BASE COUNT       39 a     23 c     20 g     31 t
ORIGIN

  Query Match           70.0%;  Score 14;  DB 28;  Length 113;
  Best Local Similarity  100.0%;  Pred. No. 2.1e+03;
  Matches   14;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 GTGCATCGATGCAG 15
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Db         63 GTGCATCGATGCAG 50


RESULT 6
BQ380106
LOCUS       BQ380106                207 bp    mRNA    linear   EST 21-MAY-2002
DEFINITION  RC1-UT0012-020800-011-a02_1 UT0012 Homo sapiens cDNA, mRNA
            sequence.
ACCESSION   BQ380106
VERSION     BQ380106.1  GI:21055620
KEYWORDS    EST.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 207)
  AUTHORS   Dias Neto,E., Garcia Correa,R., Verjovski-Almeida,S., Briones,M.R.,
            Nagai,M.A., da Silva,W. Jr., Zago,M.A., Bordin,S., Costa,F.F.,
            Goldman,G.H., Carvalho,A.F., Matsukuma,A., Baia,G.S., Simpson,D.H.,
            Brunstein,A., deOliveira,P.S., Bucher,P., Jongeneel,C.V., O'Hare
            ,M.J., Soares,F., Brentani,R.R., Reis,L.F., de Souza,S.J. and
            Simpson,A.J.
  TITLE     Shotgun sequencing of the human transcriptome with ORF expressed
            sequence tags
  JOURNAL   Proc. Natl. Acad. Sci. U.S.A. 97 (7), 3491-3496 (2000)
  MEDLINE   20202663
   PUBMED   10737800
COMMENT     Contact: Simpson A.J.G.
            Laboratory of Cancer Genetics
            Ludwig Institute for Cancer Research
            Rua Prof. Antonio Prudente 109, 4 andar, 01509-010, Sao Paulo-SP,
            Brazil
            Tel: +55-11-2704922
            Fax: +55-11-2707001
            Email: asimpson@ludwig.org.br
            This sequence was derived from the FAPESP/LICR Human Cancer Genome
            Project. This entry can be seen in the following URL
            (http://www.ludwig.org.br/scripts/gethtml2.pl?t1=RC1&t2=RC1-UT0012-
            020800-011-a02_1&t3=2000-08-02&t4=1)
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          Seq primer: puc 18 forward.
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     source          1. .207
                     /organism="Homo sapiens"
                     /mol_type="mRNA"
                     /db_xref="taxon:9606"
                     /dev_stage="Adult"
                     /clone_lib="UT0012"
                     /note="Organ: uterus tumor; Vector: puc18; Site_1: SmaI;
                     Site_2: SmaI; A mini-library was made by cloning products
                     derived from  ORESTES PCR (U.S. Letters Patent application
                     No. 196,716 -  Ludwig Institute for Cancer Research)
                     profiles into  the pUC 18 vector. Reverse transcription of
                     tissue mRNA and cDNA amplification were performed under
                     low stringency conditions."
BASE COUNT       62 a     45 c     54 g     46 t
ORIGIN

  Query Match             70.0%;  Score 14;  DB 13;  Length 207;
  Best Local Similarity   100.0%;  Pred. No. 2.1e+03;
  Matches   14;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          6 ATCGATGCAGGGGG 19
              ||||||||||||||
Db        101 ATCGATGCAGGGGG 114


RESULT 7
AV993468
LOCUS       AV993468                249 bp    mRNA    linear   EST 15-MAR-2002
DEFINITION  AV993468 Nori Satoh unpublished cDNA library, larva Ciona
            intestinalis cDNA clone cilv25g13 5', mRNA sequence.
ACCESSION   AV993468
VERSION     AV993468.1  GI:19484802
KEYWORDS    EST.
SOURCE      Ciona intestinalis
  ORGANISM  Ciona intestinalis
            Eukaryota; Metazoa; Chordata; Urochordata; Ascidiacea; Enterogona;
            Phlebobranchia; Cionidae; Ciona.
REFERENCE   1  (bases 1 to 249)
  AUTHORS   Satoh,N., Satou,Y., Kohara,Y. and Shin-i,T.
  TITLE     Expressed genes in Ciona intestinalis
  JOURNAL   Unpublished
COMMENT     Contact: Nori Satoh
            Department of Zoology
            Kyoto University
            Sakyo-ku, Kyoto, Kyoto 606-8502, Japan
            Tel: 81-75-753-4081
            Fax: 81-75-705-1113
            Email: satoh@ascidian.zool.kyoto-u.ac.jp.
FEATURES             Location/Qualifiers
     source          1. .249
                     /organism="Ciona intestinalis"
                     /mol_type="mRNA"
                     /db_xref="taxon:7719"
                     /clone="cilv25g13"
                     /tissue_type="whole animal"
                     /dev_stage="larva"
                     /clone_lib="Nori Satoh unpublished cDNA library, larva"
BASE COUNT       64 a     49 c     61 g     74 t      1 others
ORIGIN

  Query Match             70.0%;  Score 14;  DB 9;  Length 249;
  Best Local Similarity   100.0%;  Pred. No. 2.1e+03;
  Matches   14;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          6 ATCGATGCAGGGGG 19
              ||||||||||||||
Db         89 ATCGATGCAGGGGG 102


RESULT 8
BH220641/c
LOCUS       BH220641                249 bp    DNA     linear   GSS 08-NOV-2001
DEFINITION  1006096A08.x1 1006 - RescueMu Grid G Zea mays genomic, genomic
            survey sequence.
ACCESSION   BH220641
VERSION     BH220641.1  GI:16814900
KEYWORDS    GSS.
SOURCE      Zea mays
  ORGANISM  Zea mays
            Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
            Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACCAD
            clade; Panicoideae; Andropogoneae; Zea.
REFERENCE   1  (bases 1 to 249)
  AUTHORS   Walbot,V.
  TITLE     Maize genomic sequences found using engineered RescueMu transposon
  JOURNAL   Unpublished
COMMENT     Contact: Walbot V
            Department of Biological Sciences
            Stanford University
            855 California Ave, Palo Alto, CA 94304, USA
            Tel: 650 723 2227
            Fax: 650 725 8221
            Email: walbot@stanford.edu
            Plate: 1006096  row: 29
            Class: transposon-tagged.
FEATURES             Location/Qualifiers
     source          1. .249
                     /organism="Zea mays"
                     /mol_type="genomic DNA"
                     /cultivar="mixed background W23/A188/B73"
                     /db_xref="taxon:4577"
                     /tissue_type="leaf"
                     /dev_stage="adult"
                     /lab_host="DH10B"
                     /clone_lib="1006 - RescueMu Grid G"
                     /note="Organ: leaf; Vector: RescueMu (engineered from
                     pBlueScript backbone); Site_1: BamHI; Site_2: BglII;
                     RescueMu is a 4.9 kb, modified maize Mu transposon
                     designed to allow plasmid rescue from total genomic DNA.
                     Mu elements insert preferentially into transcription
                     units. For more information on RescueMu, go to the web
                     site 'www.zmdb.iastate.edu' and follow the links for
                     'RescueMu.' Grid G was grown at Stanford in 2000. DNA was
                     extracted from leaf punches, double digested using BamHI
                     and BglII, and ligated to form circular plasmids. DH10B
                     cells were transformed and then screened on LB plates with
                     ampicillin."
BASE COUNT       44 a     64 c     66 g     75 t
ORIGIN

  Query Match             70.0%;  Score 14;  DB 28;  Length 249;
  Best Local Similarity   100.0%;  Pred. No. 2.1e+03;
  Matches   14;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          3 TGCATCGATGCAGG 16
              ||||||||||||||
Db        243 TGCATCGATGCAGG 230


RESULT 9
HSM073336
ID   HSM073336  standard; RNA; EST; 285 BP.
XX
AC   BX483168;
XX
SV   BX483168.1
XX
DT   09-MAY-2003 (Rel. 75, Created)
DT   09-MAY-2003 (Rel. 75, Last updated, Version 1)
XX
DE   Homo sapiens mRNA; EST DKFZp686B17235_r1  (from clone DKFZp686B17235)
XX
KW   EST; expressed sequence tag.
XX
```

```
OS   Homo sapiens (human)
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia;
OC   Eutheria; Primates; Catarrhini; Hominidae; Homo.
XX
RN   [1]
RP   1-285
RA   Bloecker H., Boecher M., Mewes H.W., Weil B., Amid C., Osanger A., Fobo G.,
RA   Han M., Wiemann S.;
RT   ;
RL   Submitted (07-MAY-2003) to the EMBL/GenBank/DDBJ databases.
RL   MIPS, Ingolstaedter Landstr.1, D-85764 Neuherberg, GERMANY
XX
CC   This is the 5' sequence of the clone insert
CC   Clone from S. Wiemann, Molecular Genome Analysis, German Cancer
CC   Research Center (DKFZ); Email s.wiemann@dkfz-heidelberg.de;
CC   sequenced by GBF (National Research Centre for Biotechnology
CC   Ltd., Braunschweig/Germany) within the cDNA sequencing
CC   consortium of the German Genome Project.
CC   No s1 sequence available.
CC   This clone (DKFZp686B17235) is available at the RZPD in Berlin.
CC   Please contact the RZPD: Ressourcenzentrum, Heubnerweg 6,
CC   14059 Berlin-Charlottenburg, GERMANY; Email: clone@rzpd.de
XX
FH   Key             Location/Qualifiers
FH
FT   source          1. .285
FT                   /db_xref="taxon:9606"
FT                   /mol_type="mRNA"
FT                   /organism="Homo sapiens"
FT                   /clone="DKFZp686B17235"
FT                   /clone_lib="686 (synonym: hlcc3). Vector pSport1_Sfi; host
FT                   DH10B; sites SfiIA + SfiIB"
FT                   /dev_stage="adult"
FT                   /tissue_type="cDNA-collection"
XX
SQ   Sequence 285 BP; 76 A; 77 C; 74 G; 58 T; 0 other;

  Query Match             70.0%;  Score 14;  DB 2;  Length 285;
  Best Local Similarity   100.0%;  Pred. No. 2.1e+03;
  Matches   14;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          5 CATCGATGCAGGGG 18
              ||||||||||||||
Db        214 CATCGATGCAGGGG 227


RESULT 10
BM856929
LOCUS       BM856929                292 bp    mRNA    linear   EST 06-MAR-2002
DEFINITION  K-EST0141064 S21SNU520 Homo sapiens cDNA clone S21SNU520-76-D03 5',
            mRNA sequence.
ACCESSION   BM856929
VERSION     BM856929.1  GI:19213328
KEYWORDS    EST.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 292)
  AUTHORS   Kim,N.S., Hahn,Y., Oh,J.H., Lee,J.Y., Ahn,H.Y., Chu,M.Y., Kim,M.R.,
            Oh,K.J., Cheong,J.E., Sohn,H.Y., Kim,J.M., Park,H.S., Kim,S. and
            Kim,Y.S.
  TITLE     21C Frontier Korean EST Project 2001
  JOURNAL   Unpublished
COMMENT     Contact: Kim YS
            Genome Research Center
            Korea Research Institute of Bioscience & Biotechnology
            52 Eoeun-dong Yuseong-gu, Daejeon 305-333, South Korea
            Tel: +82-42-860-4470
            Fax: +82-42-860-4409
            Email: yongsung@mail.kribb.re.kr
            Plate: 76  row: D  column: 03
            High quality sequence stop: 292.
FEATURES             Location/Qualifiers
     source          1. .292
                     /organism="Homo sapiens"
                     /mol_type="mRNA"
                     /db_xref="taxon:9606"
                     /clone="S21SNU520-76-D03"
                     /sex="F"
                     /tissue_type="Stomach"
                     /cell_type="Floating aggregates"
                     /cell_line="SNU-520"
                     /lab_host="Top10F'"
                     /clone_lib="S21SNU520"
                     /note="Organ: Stomach; Vector: pTZ18RP1; Site_1: EcoRI;
                     Site_2: NotI; The poly (A)+ RNA was dephosphorylated with
                     bacterial alkaline phosphatase (BAP) and then decapped
                     with tabacco acid pyrophosphatase (TAP). The decapped
                     intact mRNA was ligated with DNA-RNA linker including EcoR
                     I site by treatment of T4 RNA ligase and the first strand
                     cDNA was synthesized from oligo dT-selected mRNA by
                     priming with dT-tailed vector. The dT-tailed vector was
                     adjusted to have about 60nt. The cDNA vector was
                     circularized with E. coli DNA ligase after digestion of
                     EcoRI which site is also included in vector. An RNA strand
                     converted to a DNA strand by Okayama-Berg method. The
                     obtained cDNA vectors were used for transformation of
                     competent cells E. coli Top10F' by electroporation method.
                     The cDNA libraries constructed by this method are
                     full-length enriched cDNA library."
BASE COUNT       94 a     52 c     70 g     76 t
ORIGIN

  Query Match             70.0%;  Score 14;  DB 12;  Length 292;
  Best Local Similarity   100.0%;  Pred. No. 2.1e+03;
  Matches   14;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          5 CATCGATGCAGGGG 18
              ||||||||||||||
Db         68 CATCGATGCAGGGG 81


RESULT 11
BW097424/c
LOCUS       BW097424                306 bp    mRNA    linear   EST 24-OCT-2002
DEFINITION  BW097424 Nori Satoh unpublished cDNA library, tailbud embryo Ciona
            intestinalis cDNA clone rcitb058o09 3', mRNA sequence.
ACCESSION   BW097424
VERSION     BW097424.1  GI:24311237
KEYWORDS    EST.
SOURCE      Ciona intestinalis
  ORGANISM  Ciona intestinalis
            Eukaryota; Metazoa; Chordata; Urochordata; Ascidiacea; Enterogona;
            Phlebobranchia; Cionidae; Ciona.
REFERENCE   1  (bases 1 to 306)
  AUTHORS   Satou,Y., Shin-i,T., Kohara,Y. and Satoh,N.
  TITLE     Expressed genes in Ciona intestinalis (2002c)
  JOURNAL   Unpublished
COMMENT     Contact: Nori Satoh
            Department of Zoology
            Kyoto University
            Sakyo-ku, Kyoto, Kyoto 606-8502, Japan
            Tel: 81-75-753-4081
            Fax: 81-75-705-1113
            Email: satoh@ascidian.zool.kyoto-u.ac.jp.
FEATURES             Location/Qualifiers
     source          1. .306
                     /organism="Ciona intestinalis"
                     /mol_type="mRNA"
                     /db_xref="taxon:7719"
                     /clone="rcitb058o09"
                     /tissue_type="whole animal"
                     /dev_stage="tailbud embryo"
                     /clone_lib="Nori Satoh unpublished cDNA library, tailbud
                     embryo"
```

```
BASE COUNT       88 a     76 c     72 g     70 t
ORIGIN

  Query Match             70.0%;  Score 14;  DB 13;  Length 306;
  Best Local Similarity   100.0%;  Pred. No. 2.1e+03;
  Matches   14;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          6 ATCGATGCAGGGGG 19
              ||||||||||||||
Db        254 ATCGATGCAGGGGG 241


RESULT 12
AW415097
LOCUS       AW415097                329 bp    mRNA    linear   EST 09-JUL-2000
DEFINITION  49143 MARC 1PIG Sus scrofa cDNA 5', mRNA sequence.
ACCESSION   AW415097
VERSION     AW415097.1  GI:6942979
KEYWORDS    EST.
SOURCE      Sus scrofa (pig)
  ORGANISM  Sus scrofa
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
REFERENCE   1  (bases 1 to 329)
  AUTHORS   Fahrenkrug,S.C., Smith,T.P.L., Freking,B.A., Cho,J., White,J.,
            Vallet,J., Wise,T., Rohrer,G.A., Pertea,G., Sultana,R., Quackenbush
            ,J. and Keele,J.W.
  TITLE     Porcine gene discovery by normalized cDNA-library sequencing and
            EST cluster assembly
  JOURNAL   Mamm. Genome 13 (8), 475-478 (2002)
  MEDLINE   22213789
   PUBMED   12226715
COMMENT     Contact: Smith TPL
            USDA, ARS, US Meat Animal Research Center
            PO Box 166, Clay Center, NE 68933-0166, USA
            Tel: 402 762 4366
            Fax: 402 762 4390
            Email: smith@email.marc.usda.gov
            Single pass sequencing. Bases called and trimmed with phred
            v0.980904.e. Vector identified by cross_match with the -minscore 20
            and -minmatch 12 options.
            PCR PRimers
            FORWARD: AGGAAACAGCTATGACCAT
            BACKWARD: GTTTTCCCAGTCACGACG
            Plate: 23  row: N  column: 24
            Seq primer: ATTTAGGTGACACTATAG.
FEATURES             Location/Qualifiers
     source          1. .329
                     /organism="Sus scrofa"
                     /mol_type="mRNA"
                     /db_xref="taxon:9823"
                     /tissue_type="pooled"
                     /lab_host="DH10B"
                     /clone_lib="MARC 1PIG"
                     /note="Vector: pCMV SPORT6; Site_1: NotI; Site_2: SalI;
                     Library made from pooled tissue from day 11, 13, 15, 20,
                     and 30 embryos."
BASE COUNT       75 a     89 c     93 g     72 t
ORIGIN

  Query Match             70.0%;  Score 14;  DB 9;  Length 329;
  Best Local Similarity   100.0%;  Pred. No. 2.1e+03;
  Matches   14;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          4 GCATCGATGCAGGG 17
              ||||||||||||||
Db         82 GCATCGATGCAGGG 95


RESULT 13
BH019162/c
LOCUS       BH019162                352 bp    DNA     linear   GSS 25-MAY-2001
DEFINITION  L242k.d_HygT3.1 Leishmania major Friedlin Cosmid Genomic Library
            Leishmania major genomic clone L242k, genomic survey sequence.
ACCESSION   BH019162
VERSION     BH019162.1  GI:14197868
KEYWORDS    GSS.
SOURCE      Leishmania major
  ORGANISM  Leishmania major
            Eukaryota; Euglenozoa; Kinetoplastida; Trypanosomatidae;
            Leishmania.
REFERENCE   1  (bases 1 to 352)
  AUTHORS   Myler,P.J., Vogt,C., Cawthra,J., Klacking,M., Marty,A., Mack,J.,
            Munden,H., Nguyen,D., Robertson,L., Sisk,E., Fazelinia,G., Aggarwal
            ,G., Nelson,S., Seyler,A., Worthey,E. and Stuart,K.
  TITLE     Leishmania major Friedlin Cosmid End Sequences
  JOURNAL   Unpublished
COMMENT     Contact: Myler PJ
            Seattle Biomedical Research Institute
            4 Nickerson Street, Seatttle, WA 98109-1651, USA
            Tel: 206 284-8846
            Fax: 206 284-0313
            Email: mylerpj@sbri.org
            Seq primer: HygT3
            Class: cosmid ends.
FEATURES             Location/Qualifiers
     source          1. .352
                     /organism="Leishmania major"
                     /mol_type="genomic DNA"
                     /strain="Friedlin"
                     /db_xref="taxon:5664"
                     /clone="L242k"
                     /lab_host="E. coli ED8767"
                     /clone_lib="Leishmania major Friedlin Cosmid Genomic
                     Library"
                     /note="Vector: cLHYG; Site_1: BamHI; Genomic DNA from
                     Leishmania major Friedlin was partially digested with
                     Sau3AI, size selected, and ligated with BamHI-digested
                     cLHYG cosmid vector DNA.  9216 clones were picked and
                     arrayed.  Library construction is described in Ivens et
                     al., Genomics Research, 8:135-145 (1998).  The cLHYG
                     vector (Acc. No. CVU59231) is described in Ryan et al,
                     Gene, 131:145-150 (1993)"
BASE COUNT       57 a    132 c     99 g     64 t
ORIGIN

  Query Match             70.0%;  Score 14;  DB 28;  Length 352;
  Best Local Similarity   100.0%;  Pred. No. 2.1e+03;
  Matches   14;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          3 TGCATCGATGCAGG 16
              ||||||||||||||
Db         98 TGCATCGATGCAGG 85


RESULT 14
AA066330
LOCUS       AA066330                360 bp    mRNA    linear   EST 04-FEB-1997
DEFINITION  mm14e06.r1 Stratagene mouse diaphragm (#937303) Mus musculus cDNA
            clone IMAGE:521506 5' similar to gb:X03208 Mouse group 1 gene
            (MOUSE);, mRNA sequence.
ACCESSION   AA066330
VERSION     AA066330.1  GI:1563400
KEYWORDS    EST.
SOURCE      Mus musculus (house mouse)
  ORGANISM  Mus musculus
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
REFERENCE   1  (bases 1 to 360)
  AUTHORS   Marra,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dubuque,T.,
            Geisel,S., Kucaba,T., Lacy,M., Le,M., Martin,J., Morris,M.,
            Schellenberg,K., Steptoe,M., Tan,F., Underwood,K., Moore,B.,
            Theising,B., Wylie,T., Lennon,G., Soares,B., Wilson,R. and
            Waterston,R.
  TITLE     The WashU-HHMI Mouse EST Project
  JOURNAL   Unpublished
```

```
COMMENT     Contact: Marra M/Mouse EST Project
            WashU-HHMI Mouse EST Project
            Washington University School of MedicineP
            4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
            Tel: 314 286 1800
            Fax: 314 286 1810
            Email: mouseest@watson.wustl.edu
            This clone is available royalty-free through LLNL ; contact the
            IMAGE Consortium (info@image.llnl.gov) for further information.
            MGI:315354
            Trace considered overall poor quality
            Seq primer: -28m13 rev1 ET from Amersham
            High quality sequence stop: 1.
FEATURES              Location/Qualifiers
     source           1. .360
                      /organism="Mus musculus"
                      /mol_type="mRNA"
                      /db_xref="taxon:10090"
                      /clone="IMAGE:521506"
                      /tissue_type="diaphragm"
                      /dev_stage="adult"
                      /lab_host="SOLR (kanamycin resistant)"
                      /clone_lib="Stratagene mouse diaphragm (#937303)"
                      /note="Organ: diaphragm; Vector: pBluescript SK-; Site_1:
                      EcoRI; Site_2: XhoI; Cloned unidirectionally from mRNA
                      prepared from diaphragm muscle.  Primer: Oligo dT. Average
                      insert size: 1.5 kb. Uni-ZAP XR Vector; ~5' adaptor
                      sequence: 5' GAATTCGGCACGAG 3' ~3' adaptor sequence: 5'
                      CTCGAGTTTTTTTTTTTTTTTT 3'"
BASE COUNT       97 a     59 c    120 g     84 t
ORIGIN

  Query Match             70.0%;  Score 14;  DB 9;  Length 360;
  Best Local Similarity   100.0%;  Pred. No. 2.1e+03;
  Matches   14;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          7 TCGATGCAGGGGGG 20
              ||||||||||||||
Db         95 TCGATGCAGGGGGG 108


RESULT 15
CB391692
LOCUS       CB391692                363 bp    mRNA    linear   EST 15-MAY-2003
DEFINITION  OSTF156H5_1 AD-wrmcDNA Caenorhabditis elegans cDNA, mRNA sequence.
ACCESSION   CB391692
VERSION     CB391692.1  GI:30733402
KEYWORDS    EST.
SOURCE      Caenorhabditis elegans
  ORGANISM  Caenorhabditis elegans
            Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditoidea
            ; Rhabditidae; Peloderinae; Caenorhabditis.
REFERENCE   1  (bases 1 to 363)
  AUTHORS   Reboul,J., Vaglio,P., Rual,J.F., Lamesch,P., Martinez,M., Armstrong
            ,C.M., Li,S., Jacotot,L., Bertin,N., Janky,R., Moore,T., Hudson
            ,J.R., Hartley,J.L., Brasch,M.A., Vandenhaute,J., Boulton,S.,
            Endress,G.A., Jenna,S., Chevet,E., Papasotiropoulos,V., Tolias,P.P.
            , Ptacek,J., Snyder,M., Huang,R., Chance,M.R., Lee,H.,
            Doucette-Stamm,L., Hill,D.E. and Vidal,M.
  TITLE     C. elegans ORFeome version 1.1: experimental verification of the
            genome annotation and resource for proteome-scale protein
            expression
  JOURNAL   Nat. Genet.,  (2003) In press
COMMENT     Contact: Vidal M
            Marc Vidal Laboratory
            Dana Farber Cancer Institute
            1 Jimmy Fund Way Smith 858, BOSTON, MA 02115, USA
            Tel: 617 632 5180
            Fax: 617 632 5739
            Email: Marc_Vidal@dfci.harvard.edu
            Sequence tag of Gateway entry clones. The primers used were
            designed on the predicted protein encoding ORF. C. elegans ORFeome
            cloning project : Contact david_hill@dfci.harvard.edu or
            marc_vidal@dfci.harvard.edu
            POLYA=No.
FEATURES              Location/Qualifiers
     source           1. .363
                      /organism="Caenorhabditis elegans"
                      /mol_type="mRNA"
                      /strain="N2"
                      /db_xref="taxon:6239"
                      /sex="Hermaphrodite and male"
                      /tissue_type="whole animal"
                      /dev_stage="mixed stage"
                      /clone_lib="AD-wrmcDNA"
                      /note="The AD-wrmcDNA library was generated with poly(A)+
                      RNA isolated from both hermaphrodite and male N2 worms of
                      all larval stages, embryos, adults and dauers and the
                      subsequent generation of cDNAs by poly(A) priming. The
                      cDNAs were cloned into pPC86"
BASE COUNT      116 a     60 c     80 g    107 t
ORIGIN

  Query Match             70.0%;  Score 14;  DB 14;  Length 363;
  Best Local Similarity   100.0%;  Pred. No. 2.1e+03;
  Matches   14;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          6 ATCGATGCAGGGGG 19
              ||||||||||||||
Db        175 ATCGATGCAGGGGG 188


Search completed: January 20, 2004, 20:01:22
Job time : 1235.76 secs
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GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: January 20, 2004, 16:34:44 ; Search time 706.471 Seconds
(without alignments)
1158.141 Million cell updates/sec

Title: US-10-068-160-1
Perfect score: 20
Sequence: 1 ggtgcatcgatgcaggggg 20

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 2888711 seqs, 20454813386 residues

Total number of hits satisfying chosen parameters: 5777422

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : GenEmbl:*
1: gb_ba:*
2: gb_htg:*
3: gb_in:*
4: gb_om:*
5: gb_ov:*
6: gb_pat:*
7: gb_ph:*
8: gb_pl:*
9: gb_pr:*
10: gb_ro:*
11: gb_sts:*
12: gb_sy:*
13: gb_un:*
14: gb_vi:*
15: em_ba:*
16: em_fun:*
17: em_hum:*
18: em_in:*
19: em_mu:*
20: em_om:*
21: em_or:*
22: em_ov:*
23: em_pat:*
24: em_ph:*
25: em_pl:*
26: em_ro:*
27: em_sts:*
28: em_un:*
29: em_vi:*
30: em_htg_hum:*
31: em_htg_inv:*
32: em_htg_other:*
33: em_htg_mus:*
34: em_htg_pln:*
35: em_htg_rod:*
36: em_htg_mam:*
37: em_htg_vrt:*
38: em_sy:*
39: em_htgo_hum:*
40: em_htgo_mus:*
41: em_htgo_other:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	20	100.0	20	6	AX194432	AX194432 Sequence
2	20	100.0	20	6	AX194434	AX194434 Sequence
3	20	100.0	20	6	AX194437	AX194437 Sequence
4	20	100.0	20	6	AX194438	AX194438 Sequence
5	20	100.0	20	6	AX194443	AX194443 Sequence
6	20	100.0	20	6	AX194472	AX194472 Sequence
7	20	100.0	20	6	AX352198	AX352198 Sequence
8	20	100.0	20	6	AX352209	AX352209 Sequence
9	20	100.0	20	6	AX352242	AX352242 Sequence
10	20	100.0	20	6	AX465382	AX465382 Sequence
11	20	100.0	20	6	AX465384	AX465384 Sequence
12	20	100.0	20	6	AX465387	AX465387 Sequence
13	20	100.0	20	6	AX465388	AX465388 Sequence
14	20	100.0	20	6	AX465393	AX465393 Sequence
15	20	100.0	20	6	AX465422	AX465422 Sequence
16	20	100.0	22	6	AX352204	AX352204 Sequence
17	20	100.0	22	6	AX352248	AX352248 Sequence
18	20	100.0	28	6	AX352219	AX352219 Sequence
19	20	100.0	28	6	AX352231	AX352231 Sequence
20	20	100.0	29	6	AX352237	AX352237 Sequence
21	20	100.0	30	6	AX352225	AX352225 Sequence
22	20	100.0	30	6	AX352230	AX352230 Sequence
23	20	100.0	32	6	AX352167	AX352167 Sequence
24	19	95.0	19	6	AX194453	AX194453 Sequence
25	19	95.0	19	6	AX194473	AX194473 Sequence
26	19	95.0	19	6	AX465403	AX465403 Sequence
27	19	95.0	19	6	AX465423	AX465423 Sequence
28	18.4	92.0	20	6	AX194440	AX194440 Sequence
29	18.4	92.0	20	6	AX194481	AX194481 Sequence
30	18.4	92.0	20	6	AX194482	AX194482 Sequence
31	18.4	92.0	20	6	AX194500	AX194500 Sequence
32	18.4	92.0	20	6	AX194501	AX194501 Sequence
33	18.4	92.0	20	6	AX194504	AX194504 Sequence
34	18.4	92.0	20	6	AX194506	AX194506 Sequence
35	18.4	92.0	20	6	AX194507	AX194507 Sequence
36	18.4	92.0	20	6	AX352202	AX352202 Sequence
37	18.4	92.0	20	6	AX352203	AX352203 Sequence
38	18.4	92.0	20	6	AX352213	AX352213 Sequence
39	18.4	92.0	20	6	AX352214	AX352214 Sequence
40	18.4	92.0	20	6	AX352246	AX352246 Sequence
41	18.4	92.0	20	6	AX352247	AX352247 Sequence
42	18.4	92.0	20	6	AX465390	AX465390 Sequence
43	18.4	92.0	20	6	AX465431	AX465431 Sequence
44	18.4	92.0	20	6	AX465432	AX465432 Sequence
45	18.4	92.0	28	6	AX352223	AX352223 Sequence

ALIGNMENTS

RESULT 1
AX194432
LOCUS AX194432 20 bp DNA linear PAT 28-AUG-2001
DEFINITION Sequence 32 from Patent WO0151500.
ACCESSION AX194432
VERSION AX194432.1 GI:15385088
KEYWORDS .
SOURCE synthetic construct
ORGANISM synthetic construct
artificial sequences.
REFERENCE 1
AUTHORS Klinman,D., Ishii,K. and Verthelyi,D.
TITLE Oligodeoxynucleotide and its use to induce an immune response
JOURNAL Patent: WO 0151500-A 32 19-JUL-2001;
Secretary of the Department of Health and Human Services (US)

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FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic DNA"
BASE COUNT        3 a      3 c      11 g      3 t
ORIGIN

  Query Match             100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 15;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 2
AX194434
LOCUS       AX194434                  20 bp    DNA     linear   PAT 28-AUG-2001
DEFINITION  Sequence 34 from Patent WO0151500.
ACCESSION   AX194434
VERSION     AX194434.1  GI:15385090
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Klinman,D., Ishii,K. and Verthelyi,D.
  TITLE     Oligodeoxynucleotide and its use to induce an immune response
  JOURNAL   Patent: WO 0151500-A 34 19-JUL-2001;
            Secretary of the Department of Health and Human Services (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic DNA"
BASE COUNT        3 a      3 c      11 g      3 t
ORIGIN

  Query Match             100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 15;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 3
AX194437
LOCUS       AX194437                  20 bp    DNA     linear   PAT 28-AUG-2001
DEFINITION  Sequence 37 from Patent WO0151500.
ACCESSION   AX194437
VERSION     AX194437.1  GI:15385093
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Klinman,D., Ishii,K. and Verthelyi,D.
  TITLE     Oligodeoxynucleotide and its use to induce an immune response
  JOURNAL   Patent: WO 0151500-A 37 19-JUL-2001;
            Secretary of the Department of Health and Human Services (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic DNA"
BASE COUNT        3 a      3 c      11 g      3 t
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  Query Match             100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 15;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 4
AX194438
LOCUS       AX194438                  20 bp    DNA     linear   PAT 28-AUG-2001
DEFINITION  Sequence 38 from Patent WO0151500.
ACCESSION   AX194438
VERSION     AX194438.1  GI:15385094
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Klinman,D., Ishii,K. and Verthelyi,D.
  TITLE     Oligodeoxynucleotide and its use to induce an immune response
  JOURNAL   Patent: WO 0151500-A 38 19-JUL-2001;
            Secretary of the Department of Health and Human Services (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic DNA"
BASE COUNT        3 a      3 c      11 g      3 t
ORIGIN

  Query Match             100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 15;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 5
AX194443
LOCUS       AX194443                  20 bp    DNA     linear   PAT 28-AUG-2001
DEFINITION  Sequence 43 from Patent WO0151500.
ACCESSION   AX194443
VERSION     AX194443.1  GI:15385099
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Klinman,D., Ishii,K. and Verthelyi,D.
  TITLE     Oligodeoxynucleotide and its use to induce an immune response
  JOURNAL   Patent: WO 0151500-A 43 19-JUL-2001;
            Secretary of the Department of Health and Human Services (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic DNA"
BASE COUNT        3 a      3 c      11 g      3 t
ORIGIN

  Query Match             100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 15;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
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Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 6
AX194472
LOCUS       AX194472                  20 bp    DNA     linear   PAT 28-AUG-2001
DEFINITION  Sequence 72 from Patent WO0151500.
ACCESSION   AX194472
VERSION     AX194472.1  GI:15385128
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Klinman,D., Ishii,K. and Verthelyi,D.
  TITLE     Oligodeoxynucleotide and its use to induce an immune response
  JOURNAL   Patent: WO 0151500-A 72 19-JUL-2001;
            Secretary of the Department of Health and Human Services (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic DNA"
BASE COUNT        3 a      3 c     11 g      3 t
ORIGIN

  Query Match             100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 15;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 7
AX352198
LOCUS       AX352198                  20 bp    DNA     linear   PAT 06-FEB-2002
DEFINITION  Sequence 494 from Patent WO0193902.
ACCESSION   AX352198
VERSION     AX352198.1  GI:18617481
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Mond,J.J., Flora,M. and Klinman,D.M.
  TITLE     Immunostimulatory rna/dna hybrid molecules
  JOURNAL   Patent: WO 0193902-A 494 13-DEC-2001;
            Biosynexus Incorporated (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic HDR"
BASE COUNT        3 a      3 c     11 g      3 t
ORIGIN

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  Best Local Similarity   100.0%;  Pred. No. 15;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 8
AX352209
LOCUS       AX352209                  20 bp    DNA     linear   PAT 06-FEB-2002
DEFINITION  Sequence 505 from Patent WO0193902.
ACCESSION   AX352209
VERSION     AX352209.1  GI:18617492
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Mond,J.J., Flora,M. and Klinman,D.M.
  TITLE     Immunostimulatory rna/dna hybrid molecules
  JOURNAL   Patent: WO 0193902-A 505 13-DEC-2001;
            Biosynexus Incorporated (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic HDR"
BASE COUNT        3 a      3 c     11 g      3 t
ORIGIN

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  Best Local Similarity   100.0%;  Pred. No. 15;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 9
AX352242
LOCUS       AX352242                  20 bp    DNA     linear   PAT 06-FEB-2002
DEFINITION  Sequence 538 from Patent WO0193902.
ACCESSION   AX352242
VERSION     AX352242.1  GI:18617525
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Mond,J.J., Flora,M. and Klinman,D.M.
  TITLE     Immunostimulatory rna/dna hybrid molecules
  JOURNAL   Patent: WO 0193902-A 538 13-DEC-2001;
            Biosynexus Incorporated (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic HDR"
BASE COUNT        3 a      3 c     11 g      3 t
ORIGIN

  Query Match             100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 15;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 10
AX465382
LOCUS       AX465382                  20 bp    DNA     linear   PAT 16-JUL-2002
DEFINITION  Sequence 50 from Patent WO0211761.
ACCESSION   AX465382
VERSION     AX465382.1  GI:21899745
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
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REFERENCE   1
  AUTHORS   Mond,J.J., Prince,G. and Klinman,D.M.
  TITLE     Vaccine against RSV
  JOURNAL   Patent: WO 0211761-A 50 14-FEB-2002;
            HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY
            MEDICINE (US)
FEATURES             Location/Qualifiers
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                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic oligonucleotide"
BASE COUNT        3 a      3 c      11 g      3 t
ORIGIN

  Query Match             100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 15;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 11
AX465384
LOCUS       AX465384                  20 bp    DNA     linear   PAT 16-JUL-2002
DEFINITION  Sequence 52 from Patent WO0211761.
ACCESSION   AX465384
VERSION     AX465384.1  GI:21899747
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Mond,J.J., Prince,G. and Klinman,D.M.
  TITLE     Vaccine against RSV
  JOURNAL   Patent: WO 0211761-A 52 14-FEB-2002;
            HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY
            MEDICINE (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic oligonucleotide"
BASE COUNT        3 a      3 c      11 g      3 t
ORIGIN

  Query Match             100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 15;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 12
AX465387
LOCUS       AX465387                  20 bp    DNA     linear   PAT 16-JUL-2002
DEFINITION  Sequence 55 from Patent WO0211761.
ACCESSION   AX465387
VERSION     AX465387.1  GI:21899750
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Mond,J.J., Prince,G. and Klinman,D.M.
  TITLE     Vaccine against RSV
  JOURNAL   Patent: WO 0211761-A 55 14-FEB-2002;
            HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY
            MEDICINE (US)
FEATURES             Location/Qualifiers
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                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic oligonucleotide"
BASE COUNT        3 a      3 c      11 g      3 t
ORIGIN

  Query Match             100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 15;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 13
AX465388
LOCUS       AX465388                  20 bp    DNA     linear   PAT 16-JUL-2002
DEFINITION  Sequence 56 from Patent WO0211761.
ACCESSION   AX465388
VERSION     AX465388.1  GI:21899751
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Mond,J.J., Prince,G. and Klinman,D.M.
  TITLE     Vaccine against RSV
  JOURNAL   Patent: WO 0211761-A 56 14-FEB-2002;
            HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY
            MEDICINE (US)
FEATURES             Location/Qualifiers
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                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic oligonucleotide"
BASE COUNT        3 a      3 c      11 g      3 t
ORIGIN

  Query Match             100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 15;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 14
AX465393
LOCUS       AX465393                  20 bp    DNA     linear   PAT 16-JUL-2002
DEFINITION  Sequence 61 from Patent WO0211761.
ACCESSION   AX465393
VERSION     AX465393.1  GI:21899756
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Mond,J.J., Prince,G. and Klinman,D.M.
  TITLE     Vaccine against RSV
  JOURNAL   Patent: WO 0211761-A 61 14-FEB-2002;
            HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY
            MEDICINE (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
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                     /db_xref="taxon:32630"
                     /note="Synthetic oligonucleotide"
BASE COUNT        3 a      3 c     11 g      3 t
ORIGIN

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  Best Local Similarity  100.0%;  Pred. No. 15;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 15
AX465422
LOCUS       AX465422                 20 bp    DNA     linear   PAT 16-JUL-2002
DEFINITION  Sequence 90 from Patent WO0211761.
ACCESSION   AX465422
VERSION     AX465422.1  GI:21899785
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Mond,J.J., Prince,G. and Klinman,D.M.
  TITLE     Vaccine against RSV
  JOURNAL   Patent: WO 0211761-A 90 14-FEB-2002;
            HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY
            MEDICINE (US)
FEATURES             Location/Qualifiers
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                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
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BASE COUNT        3 a      3 c     11 g      3 t
ORIGIN

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Qy          1 GGTGCATCGATGCAGGGGGG 20
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Job time : 707.471 secs
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(without alignments)
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Title: US-10-068-160-1
Perfect score: 20
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Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

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Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
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4	20	100.0	20	22	AAS09588	Immunoreactive CpG
5	20	100.0	20	22	AAS09593	Immunoreactive CpG
6	20	100.0	20	22	AAS09622	Immunoreactive CpG
7	20	100.0	20	22	AAC80612	Immunogenic CpG ol
8	20	100.0	20	22	AAC80614	Immunogenic CpG ol
9	20	100.0	20	22	AAC80617	Immunogenic CpG ol
10	20	100.0	20	22	AAC80618	Immunogenic CpG ol
11	20	100.0	20	22	AAC80623	Immunogenic CpG ol
12	20	100.0	20	22	AAC80652	Immunogenic CpG ol
13	20	100.0	20	24	ABK46460	Immunostimulatory
14	20	100.0	20	24	ABK46462	Immunostimulatory
15	20	100.0	20	24	ABK46465	Immunostimulatory
16	20	100.0	20	24	ABK46466	Immunostimulatory
17	20	100.0	20	24	ABK46471	Immunostimulatory
18	20	100.0	20	24	ABK46500	Immunostimulatory
19	20	100.0	20	24	ABL35568	Immunostimulatory
20	20	100.0	20	24	ABL35579	Immunostimulatory
21	20	100.0	20	24	ABL35612	Immunostimulatory
22	20	100.0	22	24	ABL35574	Immunostimulatory
23	20	100.0	22	24	ABL35618	Immunostimulatory
24	20	100.0	28	24	ABL35589	Immunostimulatory
25	20	100.0	28	24	ABL35601	Immunostimulatory
26	20	100.0	29	24	ABL35607	Immunostimulatory
27	20	100.0	30	24	ABL35595	Immunostimulatory
28	20	100.0	30	24	ABL35600	Immunostimulatory
29	20	100.0	32	24	ABL35537	Immunostimulatory
30	19	95.0	19	22	AAS09603	Immunoreactive CpG
31	19	95.0	19	22	AAS09623	Immunoreactive CpG
32	19	95.0	19	22	AAC80633	Immunogenic CpG ol
33	19	95.0	19	22	AAC80653	Immunogenic CpG ol
34	19	95.0	19	24	ABK46481	Immunostimulatory
35	19	95.0	19	24	ABK46501	Immunostimulatory
36	18.4	92.0	20	22	AAS09590	Immunoreactive CpG
37	18.4	92.0	20	22	AAS09631	Immunoreactive CpG
38	18.4	92.0	20	22	AAS09632	Immunoreactive CpG
39	18.4	92.0	20	22	AAS09650	Immunoreactive CpG
40	18.4	92.0	20	22	AAS09651	Immunoreactive CpG
41	18.4	92.0	20	22	AAS09654	Immunoreactive CpG
42	18.4	92.0	20	22	AAS09656	Immunoreactive CpG
43	18.4	92.0	20	22	AAS09657	Immunoreactive CpG
44	18.4	92.0	20	22	AAC80620	Immunogenic CpG ol
45	18.4	92.0	20	22	AAC80661	Immunogenic CpG ol

ALIGNMENTS

RESULT 1
AAS09582
ID AAS09582 standard; DNA; 20 BP.
XX
AC AAS09582;
XX
DT 26-SEP-2001 (first entry)
XX
DE Immunoreactive CpG sequence-containing oligonucleotide #32.
XX
KW CpG sequence; immune response; non-B cell activation; interferon gamma;
KW IFN-gamma; humoral; antibody production; interleukin-6 production;
KW therapeutic; allergy; asthma; cancer; autoimmune disorder; infection;
KW bio-warfare; vaccine; antisense therapy; eczema; allergic rhinitis;
KW coryza; hay fever; urticaria; hives; food allergy; atopic condition;
KW hepatitis; human immunodeficiency virus; HIV; malaria; Francisella;
KW lupus erythematosus; rheumatoid arthritis; multiple sclerosis;
KW schistosomiasis; tuberculosis; acquired immunodeficiency syndrome; AIDS;
KW Leishmania; Ebola; Anthrax; Listeria; ss.
XX
OS Synthetic.
XX
PN WO200151500-A1.
XX
PD 19-JUL-2001.
XX
PF 12-JAN-2001; 2001WO-US01122.
XX
PR 14-JAN-2000; 2000US-0176115.
XX
PA (USSH) US DEPT HEALTH & HUMAN SERVICES.

XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-442129/47.
XX
PT Oligodeoxynucleotides for inducing an immune response to treat and
PT prevent an allergic reaction, cancer, an autoimmune disorder and
PT symptoms resulting from exposure to bio-warfare agents, comprise
PT multiple CpG sequences -
XX
PS Claim 5; Page 32; 48pp; English.
XX
CC AAS09551-AAS09662 represent oligodeoxynucleotides (ODN) of at least 10
CC nucleotides comprising multiple CpG sequences, where one of the CpG
CC sequences is different from another of the multiple CpG sequences.
CC The ODN are useful for inducing an immune response, preferably a cell-
CC mediated immune response, involving non-B cell activation, interferon
CC gamma (IFN-gamma) production or a humoral immune response involving B
CC cell activation, antibody and interleukin-6 production in a host, for
CC treating, preventing or ameliorating an allergic reaction, e.g. asthma,
CC cancer, e.g. solid tumour cancer, a disease associated with the immune
CC system e.g. autoimmune disorder or an immune system deficiency, infection
CC or a symptom resulting from exposure to bio-warfare agent in a human. The
CC induction of immune response improves the efficacy of a vaccine and is
CC used in antisense therapy. The ODN are useful for treating, preventing or
CC ameliorating allergic reactions, including eczema, allergic rhinitis or
CC coryza, hay fever, bronchial asthma, urticaria (hives), food allergies
CC and other atopic conditions, for improving the efficacy of vaccines
CC against hepatitis A, B and C, human immunodeficiency virus (HIV) and
CC malaria, for treating immune system deficiencies, e.g. lupus
CC erythematosus and autoimmune diseases such as rheumatoid arthritis and
CC multiple sclerosis, infections including Francisella, schistosomiasis,
CC tuberculosis, acquired immunodeficiency syndrome (AIDS), Leishmania and
CC symptoms resulting from exposure of bio-warfare agent, including Ebola,
CC Anthrax and Listeria.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

Query Match 100.0%; Score 20; DB 22; Length 20;
Best Local Similarity 100.0%; Pred. No. 2;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 2
AAS09584
ID AAS09584 standard; DNA; 20 BP.
XX
AC AAS09584;
XX
DT 26-SEP-2001 (first entry)
XX
DE Immunoreactive CpG sequence-containing oligonucleotide #34.
XX
KW CpG sequence; immune response; non-B cell activation; interferon gamma;
KW IFN-gamma; humoral; antibody production; interleukin-6 production;
KW therapeutic; allergy; asthma; cancer; autoimmune disorder; infection;
KW bio-warfare; vaccine; antisense therapy; eczema; allergic rhinitis;
KW coryza; hay fever; urticaria; hives; food allergy; atopic condition;
KW hepatitis; human immunodeficiency virus; HIV; malaria; Francisella;
KW lupus erythematosus; rheumatoid arthritis; multiple sclerosis;
KW schistosomiasis; tuberculosis; acquired immunodeficiency syndrome; AIDS;
KW Leishmania; Ebola; Anthrax; Listeria; ss.
XX
OS Synthetic.
XX
PN WO200151500-A1.
XX
PD 19-JUL-2001.
XX
PF 12-JAN-2001; 2001WO-US01122.
XX
PR 14-JAN-2000; 2000US-0176115.
XX
PA (USSH) US DEPT HEALTH & HUMAN SERVICES.
XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-442129/47.
XX
PT Oligodeoxynucleotides for inducing an immune response to treat and
PT prevent an allergic reaction, cancer, an autoimmune disorder and
PT symptoms resulting from exposure to bio-warfare agents, comprise
PT multiple CpG sequences -
XX
PS Claim 5; Page 32; 48pp; English.
XX
CC AAS09551-AAS09662 represent oligodeoxynucleotides (ODN) of at least 10
CC nucleotides comprising multiple CpG sequences, where one of the CpG
CC sequences is different from another of the multiple CpG sequences.
CC The ODN are useful for inducing an immune response, preferably a cell-
CC mediated immune response, involving non-B cell activation, interferon
CC gamma (IFN-gamma) production or a humoral immune response involving B
CC cell activation, antibody and interleukin-6 production in a host, for
CC treating, preventing or ameliorating an allergic reaction, e.g. asthma,
CC cancer, e.g. solid tumour cancer, a disease associated with the immune
CC system e.g. autoimmune disorder or an immune system deficiency, infection
CC or a symptom resulting from exposure to bio-warfare agent in a human. The
CC induction of immune response improves the efficacy of a vaccine and is
CC used in antisense therapy. The ODN are useful for treating, preventing or
CC ameliorating allergic reactions, including eczema, allergic rhinitis or
CC coryza, hay fever, bronchial asthma, urticaria (hives), food allergies
CC and other atopic conditions, for improving the efficacy of vaccines
CC against hepatitis A, B and C, human immunodeficiency virus (HIV) and
CC malaria, for treating immune system deficiencies, e.g. lupus
CC erythematosus and autoimmune diseases such as rheumatoid arthritis and
CC multiple sclerosis, infections including Francisella, schistosomiasis,
CC tuberculosis, acquired immunodeficiency syndrome (AIDS), Leishmania and
CC symptoms resulting from exposure of bio-warfare agent, including Ebola,
CC Anthrax and Listeria.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

Query Match 100.0%; Score 20; DB 22; Length 20;
Best Local Similarity 100.0%; Pred. No. 2;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 3
AAS09587
ID AAS09587 standard; DNA; 20 BP.
XX
AC AAS09587;
XX
DT 26-SEP-2001 (first entry)
XX
DE Immunoreactive CpG sequence-containing oligonucleotide #37.
XX
KW CpG sequence; immune response; non-B cell activation; interferon gamma;
KW IFN-gamma; humoral; antibody production; interleukin-6 production;
KW therapeutic; allergy; asthma; cancer; autoimmune disorder; infection;
KW bio-warfare; vaccine; antisense therapy; eczema; allergic rhinitis;
KW coryza; hay fever; urticaria; hives; food allergy; atopic condition;
KW hepatitis; human immunodeficiency virus; HIV; malaria; Francisella;
KW lupus erythematosus; rheumatoid arthritis; multiple sclerosis;
KW schistosomiasis; tuberculosis; acquired immunodeficiency syndrome; AIDS;
KW Leishmania; Ebola; Anthrax; Listeria; ss.
XX
OS Synthetic.

```
XX
PN   WO200151500-A1.
XX
PD   19-JUL-2001.
XX
PF   12-JAN-2001; 2001WO-US01122.
XX
PR   14-JAN-2000; 2000US-0176115.
XX
PA   (USSH ) US DEPT HEALTH & HUMAN SERVICES.
XX
PI   Klinman D,  Ishii K,  Verthelyi D;
XX
DR   WPI; 2001-442129/47.
XX
PT   Oligodeoxynucleotides for inducing an immune response to treat and
PT   prevent an allergic reaction, cancer, an autoimmune disorder and
PT   symptoms resulting from exposure to bio-warfare agents, comprise
PT   multiple CpG sequences  -
XX
PS   Claim 5; Page 33; 48pp; English.
XX
CC   AAS09551-AAS09662 represent oligodeoxynucleotides (ODN) of at least 10
CC   nucleotides comprising multiple CpG sequences, where one of the CpG
CC   sequences is different from another of the multiple CpG sequences.
CC   The ODN are useful for inducing an immune response, preferably a cell-
CC   mediated immune response, involving non-B cell activation, interferon
CC   gamma (IFN-gamma) production or a humoral immune response involving B
CC   cell activation, antibody and interleukin-6 production in a host, for
CC   treating, preventing or ameliorating an allergic reaction, e.g. asthma,
CC   cancer, e.g. solid tumour cancer, a disease associated with the immune
CC   system e.g. autoimmune disorder or an immune system deficiency, infection
CC   or a symptom resulting from exposure to bio-warfare agent in a human. The
CC   induction of immune response improves the efficacy of a vaccine and is
CC   used in antisense therapy. The ODN are useful for treating, preventing or
CC   ameliorating allergic reactions, including eczema, allergic rhinitis or
CC   coryza, hay fever, bronchial asthma, urticaria (hives), food allergies
CC   and other atopic conditions, for improving the efficacy of vaccines
CC   against hepatitis A, B and C, human immunodeficiency virus (HIV) and
CC   malaria, for treating immune system deficiencies, e.g. lupus
CC   erythematosus and autoimmune diseases such as rheumatoid arthritis and
CC   multiple sclerosis, infections including Francisella, schistosomiasis,
CC   tuberculosis, acquired immunodeficiency syndrome (AIDS), Leishmania and
CC   symptoms resulting from exposure of bio-warfare agent, including Ebola,
CC   Anthrax and Listeria.
XX
SQ   Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

  Query Match             100.0%;  Score 20;  DB 22;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 2;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 4
AAS09588
ID   AAS09588 standard; DNA; 20 BP.
XX
AC   AAS09588;
XX
DT   26-SEP-2001  (first entry)
XX
DE   Immunoreactive CpG sequence-containing oligonucleotide #38.
XX
KW   CpG sequence; immune response; non-B cell activation; interferon gamma;
KW   IFN-gamma; humoral; antibody production; interleukin-6 production;
KW   therapeutic; allergy; asthma; cancer; autoimmune disorder; infection;
KW   bio-warfare; vaccine; antisense therapy; eczema; allergic rhinitis;
KW   coryza; hay fever; urticaria; hives; food allergy; atopic condition;
KW   hepatitis; human immunodeficiency virus; HIV; malaria; Francisella;
KW   lupus erythematosus; rheumatoid arthritis; multiple sclerosis;
KW   schistosomiasis; tuberculosis; acquired immunodeficiency syndrome; AIDS;
KW   Leishmania; Ebola; Anthrax; Listeria; ss.
XX
OS   Synthetic.
XX
PN   WO200151500-A1.
XX
PD   19-JUL-2001.
XX
PF   12-JAN-2001; 2001WO-US01122.
XX
PR   14-JAN-2000; 2000US-0176115.
XX
PA   (USSH ) US DEPT HEALTH & HUMAN SERVICES.
XX
PI   Klinman D,  Ishii K,  Verthelyi D;
XX
DR   WPI; 2001-442129/47.
XX
PT   Oligodeoxynucleotides for inducing an immune response to treat and
PT   prevent an allergic reaction, cancer, an autoimmune disorder and
PT   symptoms resulting from exposure to bio-warfare agents, comprise
PT   multiple CpG sequences  -
XX
PS   Claim 5; Page 33; 48pp; English.
XX
CC   AAS09551-AAS09662 represent oligodeoxynucleotides (ODN) of at least 10
CC   nucleotides comprising multiple CpG sequences, where one of the CpG
CC   sequences is different from another of the multiple CpG sequences.
CC   The ODN are useful for inducing an immune response, preferably a cell-
CC   mediated immune response, involving non-B cell activation, interferon
CC   gamma (IFN-gamma) production or a humoral immune response involving B
CC   cell activation, antibody and interleukin-6 production in a host, for
CC   treating, preventing or ameliorating an allergic reaction, e.g. asthma,
CC   cancer, e.g. solid tumour cancer, a disease associated with the immune
CC   system e.g. autoimmune disorder or an immune system deficiency, infection
CC   or a symptom resulting from exposure to bio-warfare agent in a human. The
CC   induction of immune response improves the efficacy of a vaccine and is
CC   used in antisense therapy. The ODN are useful for treating, preventing or
CC   ameliorating allergic reactions, including eczema, allergic rhinitis or
CC   coryza, hay fever, bronchial asthma, urticaria (hives), food allergies
CC   and other atopic conditions, for improving the efficacy of vaccines
CC   against hepatitis A, B and C, human immunodeficiency virus (HIV) and
CC   malaria, for treating immune system deficiencies, e.g. lupus
CC   erythematosus and autoimmune diseases such as rheumatoid arthritis and
CC   multiple sclerosis, infections including Francisella, schistosomiasis,
CC   tuberculosis, acquired immunodeficiency syndrome (AIDS), Leishmania and
CC   symptoms resulting from exposure of bio-warfare agent, including Ebola,
CC   Anthrax and Listeria.
XX
SQ   Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

  Query Match             100.0%;  Score 20;  DB 22;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 2;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 5
AAS09593
ID   AAS09593 standard; DNA; 20 BP.
XX
AC   AAS09593;
XX
DT   26-SEP-2001  (first entry)
XX
DE   Immunoreactive CpG sequence-containing oligonucleotide #43.
XX
KW   CpG sequence; immune response; non-B cell activation; interferon gamma;
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```
KW   IFN-gamma; humoral; antibody production; interleukin-6 production;
KW   therapeutic; allergy; asthma; cancer; autoimmune disorder; infection;
KW   bio-warfare; vaccine; antisense therapy; eczema; allergic rhinitis;
KW   coryza; hay fever; urticaria; hives; food allergy; atopic condition;
KW   hepatitis; human immunodeficiency virus; HIV; malaria; Francisella;
KW   lupus erythematosus; rheumatoid arthritis; multiple sclerosis;
KW   schistosomiasis; tuberculosis; acquired immunodeficiency syndrome; AIDS;
KW   Leishmania; Ebola; Anthrax; Listeria; ss.
XX
OS   Synthetic.
XX
PN   WO200151500-A1.
XX
PD   19-JUL-2001.
XX
PF   12-JAN-2001; 2001WO-US01122.
XX
PR   14-JAN-2000; 2000US-0176115.
XX
PA   (USSH ) US DEPT HEALTH & HUMAN SERVICES.
XX
PI   Klinman D,  Ishii K,  Verthelyi D;
XX
DR   WPI; 2001-442129/47.
XX
PT   Oligodeoxynucleotides for inducing an immune response to treat and
PT   prevent an allergic reaction, cancer, an autoimmune disorder and
PT   symptoms resulting from exposure to bio-warfare agents, comprise
PT   multiple CpG sequences  -
XX
PS   Claim 5; Page 34; 48pp; English.
XX
CC   AAS09551-AAS09662 represent oligodeoxynucleotides (ODN) of at least 10
CC   nucleotides comprising multiple CpG sequences, where one of the CpG
CC   sequences is different from another of the multiple CpG sequences.
CC   The ODN are useful for inducing an immune response, preferably a cell-
CC   mediated immune response, involving non-B cell activation, interferon
CC   gamma (IFN-gamma) production or a humoral immune response involving B
CC   cell activation, antibody and interleukin-6 production in a host, for
CC   treating, preventing or ameliorating an allergic reaction, e.g. asthma,
CC   cancer, e.g. solid tumour cancer, a disease associated with the immune
CC   system e.g. autoimmune disorder or an immune system deficiency, infection
CC   or a symptom resulting from exposure to bio-warfare agent in a human. The
CC   induction of immune response improves the efficacy of a vaccine and is
CC   used in antisense therapy. The ODN are useful for treating, preventing or
CC   ameliorating allergic reactions, including eczema, allergic rhinitis or
CC   coryza, hay fever, bronchial asthma, urticaria (hives), food allergies
CC   and other atopic conditions, for improving the efficacy of vaccines
CC   against hepatitis A, B and C, human immunodeficiency virus (HIV) and
CC   malaria, for treating immune system deficiencies, e.g. lupus
CC   erythematosus and autoimmune diseases such as rheumatoid arthritis and
CC   multiple sclerosis, infections including Francisella, schistosomiasis,
CC   tuberculosis, acquired immunodeficiency syndrome (AIDS), Leishmania and
CC   symptoms resulting from exposure of bio-warfare agent, including Ebola,
CC   Anthrax and Listeria.
XX
SQ   Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

  Query Match             100.0%;  Score 20;  DB 22;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 2;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 6
AAS09622
ID   AAS09622 standard; DNA; 20 BP.
XX
AC   AAS09622;
XX
DT   26-SEP-2001  (first entry)
XX
DE   Immunoreactive CpG sequence-containing oligonucleotide #72.
XX
KW   CpG sequence; immune response; non-B cell activation; interferon gamma;
KW   IFN-gamma; humoral; antibody production; interleukin-6 production;
KW   therapeutic; allergy; asthma; cancer; autoimmune disorder; infection;
KW   bio-warfare; vaccine; antisense therapy; eczema; allergic rhinitis;
KW   coryza; hay fever; urticaria; hives; food allergy; atopic condition;
KW   hepatitis; human immunodeficiency virus; HIV; malaria; Francisella;
KW   lupus erythematosus; rheumatoid arthritis; multiple sclerosis;
KW   schistosomiasis; tuberculosis; acquired immunodeficiency syndrome; AIDS;
KW   Leishmania; Ebola; Anthrax; Listeria; ss.
XX
OS   Synthetic.
XX
PN   WO200151500-A1.
XX
PD   19-JUL-2001.
XX
PF   12-JAN-2001; 2001WO-US01122.
XX
PR   14-JAN-2000; 2000US-0176115.
XX
PA   (USSH ) US DEPT HEALTH & HUMAN SERVICES.
XX
PI   Klinman D,  Ishii K,  Verthelyi D;
XX
DR   WPI; 2001-442129/47.
XX
PT   Oligodeoxynucleotides for inducing an immune response to treat and
PT   prevent an allergic reaction, cancer, an autoimmune disorder and
PT   symptoms resulting from exposure to bio-warfare agents, comprise
PT   multiple CpG sequences  -
XX
PS   Claim 5; Page 39; 48pp; English.
XX
CC   AAS09551-AAS09662 represent oligodeoxynucleotides (ODN) of at least 10
CC   nucleotides comprising multiple CpG sequences, where one of the CpG
CC   sequences is different from another of the multiple CpG sequences.
CC   The ODN are useful for inducing an immune response, preferably a cell-
CC   mediated immune response, involving non-B cell activation, interferon
CC   gamma (IFN-gamma) production or a humoral immune response involving B
CC   cell activation, antibody and interleukin-6 production in a host, for
CC   treating, preventing or ameliorating an allergic reaction, e.g. asthma,
CC   cancer, e.g. solid tumour cancer, a disease associated with the immune
CC   system e.g. autoimmune disorder or an immune system deficiency, infection
CC   or a symptom resulting from exposure to bio-warfare agent in a human. The
CC   induction of immune response improves the efficacy of a vaccine and is
CC   used in antisense therapy. The ODN are useful for treating, preventing or
CC   ameliorating allergic reactions, including eczema, allergic rhinitis or
CC   coryza, hay fever, bronchial asthma, urticaria (hives), food allergies
CC   and other atopic conditions, for improving the efficacy of vaccines
CC   against hepatitis A, B and C, human immunodeficiency virus (HIV) and
CC   malaria, for treating immune system deficiencies, e.g. lupus
CC   erythematosus and autoimmune diseases such as rheumatoid arthritis and
CC   multiple sclerosis, infections including Francisella, schistosomiasis,
CC   tuberculosis, acquired immunodeficiency syndrome (AIDS), Leishmania and
CC   symptoms resulting from exposure of bio-warfare agent, including Ebola,
CC   Anthrax and Listeria.
XX
SQ   Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

  Query Match             100.0%;  Score 20;  DB 22;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 2;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 7
```

AAC80612
ID AAC80612 standard; DNA; 20 BP.
XX
AC AAC80612;
XX
DT 14-FEB-2001 (first entry)
XX
DE Immunogenic CpG oligodeoxynucleotide, SEQ ID NO:32.
XX
KW CpG oligodeoxynucleotide; unmethylated; antigen-presenting cell;
KW immunogenic; cytokine release; natural killer cell; NK cell activation;
KW cell-mediated immune response; T-cell response; humoral response;
KW B-cell response; antibody production; immune response induction;
KW vaccine; allergy; asthma; infection; bacterial; viral; fungal; protozoal;
KW parasitic; tuberculosis; AIDS; autoimmune disease; lupus erythematosus;
KW rheumatoid arthritis; multiple sclerosis; solid tumour; cancer;
KW immune deficiency; biological warfare agent; cytostatic; antiarthritic;
KW antimicrobial; antiallergic; protozoacide; tuberculostatic;
KW antiasthmatic; dermatological; phosphorothioate; ss.
XX
OS Synthetic.
XX
PN WO200061151-A2.
XX
PD 19-OCT-2000.
XX
PF 12-APR-2000; 2000WO-US09839.
XX
PR 12-APR-1999; 99US-0128898.
XX
PA (KLIN/) KLINMAN D.
PA (ISHI/) ISHII K.
PA (VERT/) VERTHELYI D.
XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-006880/01.
XX
PT Novel oligonucleotides useful for the prevention and treatment of
PT allergies, cancer, and autoimmune disorders and for ameliorating
PT symptoms resulting from exposure to a bio-warfare agent -
XX
PS Claim 4; Page 29; 46pp; English.
XX
CC The invention relates to novel immunogenic CpG oligodeoxynucleotides
CC (AAC80581-C80723). The oligonucleotide are at least 10 bases long
CC and comprise one of the generic sequences 5'-NNNT-CpG-WNNN-3' or
CC 5'-RY-CpG-RY-3'. The central CpG motif is unmethylated, and the
CC oligonucleotides optionally have phosphorothioate linkages which make
CC them more resistant to degradation. The invention also relates to an
CC oligonucleotide delivery complex comprising an oligonucleotide of the
CC invention and a targetting agent, and a pharmaceutical composition
CC comprising the oligonucleotide delivery complex. The oligonucleotides
CC are able to induce either a cell-mediated (T-cell) response or a humoral
CC (B-cell, antibody) response, with oligonucleotides of the sequence
CC 5'-RY-CpG-RY-3' being able to induce a cell-mediated response, and those
CC of the sequence 5'-NNNT-CpG-WNNN-3' being able to induce a humoral
CC response. It is thought that after administration, the oligonucleotide
CC acts on antigen-presenting cells (e.g., macrophages and dendritic
CC cells), which then release cytokines, leading to activation of natural
CC killer (NK) cells. A cell-mediated or humoral response can then occur by
CC activation of T- or B-cells. The induction of an immune response is
CC useful for treating, preventing or ameliorating an allergic reaction
CC (preferably asthma), or an infection, where an immunogenic CpG
CC oligonucleotide is administered either alone or in combination with an
CC anti-allergenic agent or anti-infectious agent. The allergic conditions
CC which may be treated include eczema, allergic rhinitis, hayfever,
CC urticaria, food allergies and other atopic conditions, and the
CC infections which may be treated include viral, bacterial, fungal and
CC protozoal infections such as tuberculosis, AIDS, leishmania and
CC schistosomiasis. Immune response induction may also be used in the
CC treatment of an autoimmune disorder (e.g., lupus erythematosus,
CC rheumatoid arthritis and multiple sclerosis), a disease associated with
CC immune system deficiency, and symptoms resulting from exposure to an
CC agent of biological warfare. An immunogenic CpG oligonucleotide, either
CC alone or in combination with an anti-cancer agent, is useful for treating
CC solid tumour cancer. The induction of an immune response is used in
CC antisense therapy and to improve the efficacy of a vaccine. The
CC oligonucleotide is preferably administered to lymphocytes ex vivo,
CC producing activated lymphocytes which are then administered to the host.
CC The present sequence represents an immunogenic CpG oligodeoxynucleotide
CC of the invention.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

Query Match 100.0%; Score 20; DB 22; Length 20;
Best Local Similarity 100.0%; Pred. No. 2;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 8
AAC80614
ID AAC80614 standard; DNA; 20 BP.
XX
AC AAC80614;
XX
DT 14-FEB-2001 (first entry)
XX
DE Immunogenic CpG oligodeoxynucleotide, SEQ ID NO:34.
XX
KW CpG oligodeoxynucleotide; unmethylated; antigen-presenting cell;
KW immunogenic; cytokine release; natural killer cell; NK cell activation;
KW cell-mediated immune response; T-cell response; humoral response;
KW B-cell response; antibody production; immune response induction;
KW vaccine; allergy; asthma; infection; bacterial; viral; fungal; protozoal;
KW parasitic; tuberculosis; AIDS; autoimmune disease; lupus erythematosus;
KW rheumatoid arthritis; multiple sclerosis; solid tumour; cancer;
KW immune deficiency; biological warfare agent; cytostatic; antiarthritic;
KW antimicrobial; antiallergic; protozoacide; tuberculostatic;
KW antiasthmatic; dermatological; phosphorothioate; ss.
XX
OS Synthetic.
XX
PN WO200061151-A2.
XX
PD 19-OCT-2000.
XX
PF 12-APR-2000; 2000WO-US09839.
XX
PR 12-APR-1999; 99US-0128898.
XX
PA (KLIN/) KLINMAN D.
PA (ISHI/) ISHII K.
PA (VERT/) VERTHELYI D.
XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-006880/01.
XX
PT Novel oligonucleotides useful for the prevention and treatment of
PT allergies, cancer, and autoimmune disorders and for ameliorating
PT symptoms resulting from exposure to a bio-warfare agent -
XX
PS Claim 4; Page 29; 46pp; English.
XX
CC The invention relates to novel immunogenic CpG oligodeoxynucleotides
CC (AAC80581-C80723). The oligonucleotide are at least 10 bases long
CC and comprise one of the generic sequences 5'-NNNT-CpG-WNNN-3' or
CC 5'-RY-CpG-RY-3'. The central CpG motif is unmethylated, and the
CC oligonucleotides optionally have phosphorothioate linkages which make
CC them more resistant to degradation. The invention also relates to an
CC oligonucleotide delivery complex comprising an oligonucleotide of the

CC invention and a targetting agent, and a pharmaceutical composition
CC comprising the oligonucleotide delivery complex. The oligonucleotides
CC are able to induce either a cell-mediated (T-cell) response or a humoral
CC (B-cell, antibody) response, with oligonucleotides of the sequence
CC 5'-RY-CpG-RY-3' being able to induce a cell-mediated response, and those
CC of the sequence 5'-NNNT-CpG-WNNN-3' being able to induce a humoral
CC response. It is thought that after administration, the oligonucleotide
CC acts on antigen-presenting cells (e.g., macrophages and dendritic
CC cells), which then release cytokines, leading to activation of natural
CC killer (NK) cells. A cell-mediated or humoral response can then occur by
CC activation of T- or B-cells. The induction of an immune response is
CC useful for treating, preventing or ameliorating an allergic reaction
CC (preferably asthma), or an infection, where an immunogenic CpG
CC oligonucleotide is administered either alone or in combination with an
CC anti-allergenic agent or anti-infectious agent. The allergic conditions
CC which may be treated include eczema, allergic rhinitis, hayfever,
CC urticaria, food allergies and other atopic conditions, and the
CC infections which may be treated include viral, bacterial, fungal and
CC protozoal infections such as tuberculosis, AIDS, leishmania and
CC schistosomiasis. Immune response induction may also be used in the
CC treatment of an autoimmune disorder (e.g., lupus erythematosus,
CC rheumatoid arthritis and multiple sclerosis), a disease associated with
CC immune system deficiency, and symptoms resulting from exposure to an
CC agent of biological warfare. An immunogenic CpG oligonucleotide, either
CC alone or in combination with an anti-cancer agent, is useful for treating
CC solid tumour cancer. The induction of an immune response is used in
CC antisense therapy and to improve the efficacy of a vaccine. The
CC oligonucleotide is preferably administered to lymphocytes ex vivo,
CC producing activated lymphocytes which are then administered to the host.
CC The present sequence represents an immunogenic CpG oligodeoxynucleotide
CC of the invention.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

Query Match 100.0%; Score 20; DB 22; Length 20;
Best Local Similarity 100.0%; Pred. No. 2;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 9
AAC80617
ID AAC80617 standard; DNA; 20 BP.
XX
AC AAC80617;
XX
DT 14-FEB-2001 (first entry)
XX
DE Immunogenic CpG oligodeoxynucleotide, SEQ ID NO:37.
XX
KW CpG oligodeoxynucleotide; unmethylated; antigen-presenting cell;
KW immunogenic; cytokine release; natural killer cell; NK cell activation;
KW cell-mediated immune response; T-cell response; humoral response;
KW B-cell response; antibody production; immune response induction;
KW vaccine; allergy; asthma; infection; bacterial; viral; fungal; protozoal;
KW parasitic; tuberculosis; AIDS; autoimmune disease; lupus erythematosus;
KW rheumatoid arthritis; multiple sclerosis; solid tumour; cancer;
KW immune deficiency; biological warfare agent; cytostatic; antiarthritic;
KW antimicrobial; antiallergic; protozoacide; tuberculostatic;
KW antiasthmatic; dermatological; phosphorothioate; ss.
XX
OS Synthetic.
XX
PN WO200061151-A2.
XX
PD 19-OCT-2000.
XX
PF 12-APR-2000; 2000WO-US09839.
XX
PR 12-APR-1999; 99US-0128898.
XX
PA (KLIN/) KLINMAN D.
PA (ISHI/) ISHII K.
PA (VERT/) VERTHELYI D.
XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-006880/01.
XX
PT Novel oligonucleotides useful for the prevention and treatment of
PT allergies, cancer, and autoimmune disorders and for ameliorating
PT symptoms resulting from exposure to a bio-warfare agent -
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CC (AAC80581-C80723). The oligonucleotide are at least 10 bases long
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CC 5'-RY-CpG-RY-3'. The central CpG motif is unmethylated, and the
CC oligonucleotides optionally have phosphorothioate linkages which make
CC them more resistant to degradation. The invention also relates to an
CC oligonucleotide delivery complex comprising an oligonucleotide of the
CC invention and a targetting agent, and a pharmaceutical composition
CC comprising the oligonucleotide delivery complex. The oligonucleotides
CC are able to induce either a cell-mediated (T-cell) response or a humoral
CC (B-cell, antibody) response, with oligonucleotides of the sequence
CC 5'-RY-CpG-RY-3' being able to induce a cell-mediated response, and those
CC of the sequence 5'-NNNT-CpG-WNNN-3' being able to induce a humoral
CC response. It is thought that after administration, the oligonucleotide
CC acts on antigen-presenting cells (e.g., macrophages and dendritic
CC cells), which then release cytokines, leading to activation of natural
CC killer (NK) cells. A cell-mediated or humoral response can then occur by
CC activation of T- or B-cells. The induction of an immune response is
CC useful for treating, preventing or ameliorating an allergic reaction
CC (preferably asthma), or an infection, where an immunogenic CpG
CC oligonucleotide is administered either alone or in combination with an
CC anti-allergenic agent or anti-infectious agent. The allergic conditions
CC which may be treated include eczema, allergic rhinitis, hayfever,
CC urticaria, food allergies and other atopic conditions, and the
CC infections which may be treated include viral, bacterial, fungal and
CC protozoal infections such as tuberculosis, AIDS, leishmania and
CC schistosomiasis. Immune response induction may also be used in the
CC treatment of an autoimmune disorder (e.g., lupus erythematosus,
CC rheumatoid arthritis and multiple sclerosis), a disease associated with
CC immune system deficiency, and symptoms resulting from exposure to an
CC agent of biological warfare. An immunogenic CpG oligonucleotide, either
CC alone or in combination with an anti-cancer agent, is useful for treating
CC solid tumour cancer. The induction of an immune response is used in
CC antisense therapy and to improve the efficacy of a vaccine. The
CC oligonucleotide is preferably administered to lymphocytes ex vivo,
CC producing activated lymphocytes which are then administered to the host.
CC The present sequence represents an immunogenic CpG oligodeoxynucleotide
CC of the invention.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

Query Match 100.0%; Score 20; DB 22; Length 20;
Best Local Similarity 100.0%; Pred. No. 2;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 10
AAC80618
ID AAC80618 standard; DNA; 20 BP.
XX
AC AAC80618;
XX
DT 14-FEB-2001 (first entry)
XX

DE Immunogenic CpG oligodeoxynucleotide, SEQ ID NO:38.
XX
KW CpG oligodeoxynucleotide; unmethylated; antigen-presenting cell;
KW immunogenic; cytokine release; natural killer cell; NK cell activation;
KW cell-mediated immune response; T-cell response; humoral response;
KW B-cell response; antibody production; immune response induction;
KW vaccine; allergy; asthma; infection; bacterial; viral; fungal; protozoal;
KW parasitic; tuberculosis; AIDS; autoimmune disease; lupus erythematosus;
KW rheumatoid arthritis; multiple sclerosis; solid tumour; cancer;
KW immune deficiency; biological warfare agent; cytostatic; antiarthritic;
KW antimicrobial; antiallergic; protozoacide; tuberculostatic;
KW antiasthmatic; dermatological; phosphorothioate; ss.
XX
OS Synthetic.
XX
PN WO200061151-A2.
XX
PD 19-OCT-2000.
XX
PF 12-APR-2000; 2000WO-US09839.
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PR 12-APR-1999; 99US-0128898.
XX
PA (KLIN/) KLINMAN D.
PA (ISHI/) ISHII K.
PA (VERT/) VERTHELYI D.
XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-006880/01.
XX
PT Novel oligonucleotides useful for the prevention and treatment of
PT allergies, cancer, and autoimmune disorders and for ameliorating
PT symptoms resulting from exposure to a bio-warfare agent -
XX
PS Claim 4; Page 30; 46pp; English.
XX
CC The invention relates to novel immunogenic CpG oligodeoxynucleotides
CC (AAC80581-C80723). The oligonucleotide are at least 10 bases long
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CC 5'-RY-CpG-RY-3'. The central CpG motif is unmethylated, and the
CC oligonucleotides optionally have phosphorothioate linkages which make
CC them more resistant to degradation. The invention also relates to an
CC oligonucleotide delivery complex comprising an oligonucleotide of the
CC invention and a targetting agent, and a pharmaceutical composition
CC comprising the oligonucleotide delivery complex. The oligonucleotides
CC are able to induce either a cell-mediated (T-cell) response or a humoral
CC (B-cell, antibody) response, with oligonucleotides of the sequence
CC 5'-RY-CpG-RY-3' being able to induce a cell-mediated response, and those
CC of the sequence 5'-NNNT-CpG-WNNN-3' being able to induce a humoral
CC response. It is thought that after administration, the oligonucleotide
CC acts on antigen-presenting cells (e.g., macrophages and dendritic
CC cells), which then release cytokines, leading to activation of natural
CC killer (NK) cells. A cell-mediated or humoral response can then occur by
CC activation of T- or B-cells. The induction of an immune response is
CC useful for treating, preventing or ameliorating an allergic reaction
CC (preferably asthma), or an infection, where an immunogenic CpG
CC oligonucleotide is administered either alone or in combination with an
CC anti-allergenic agent or anti-infectious agent. The allergic conditions
CC which may be treated include eczema, allergic rhinitis, hayfever,
CC urticaria, food allergies and other atopic conditions, and the
CC infections which may be treated include viral, bacterial, fungal and
CC protozoal infections such as tuberculosis, AIDS, leishmania and
CC schistosomiasis. Immune response induction may also be used in the
CC treatment of an autoimmune disorder (e.g., lupus erythematosus,
CC rheumatoid arthritis and multiple sclerosis), a disease associated with
CC immune system deficiency, and symptoms resulting from exposure to an
CC agent of biological warfare. An immunogenic CpG oligonucleotide, either
CC alone or in combination with an anti-cancer agent, is useful for treating
CC solid tumour cancer. The induction of an immune response is used in
CC antisense therapy and to improve the efficacy of a vaccine. The
CC oligonucleotide is preferably administered to lymphocytes ex vivo,
CC producing activated lymphocytes which are then administered to the host.
CC The present sequence represents an immunogenic CpG oligodeoxynucleotide
CC of the invention.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

Query Match 100.0%; Score 20; DB 22; Length 20;
Best Local Similarity 100.0%; Pred. No. 2;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 11
AAC80623
ID AAC80623 standard; DNA; 20 BP.
XX
AC AAC80623;
XX
DT 14-FEB-2001 (first entry)
XX
DE Immunogenic CpG oligodeoxynucleotide, SEQ ID NO:43.
XX
KW CpG oligodeoxynucleotide; unmethylated; antigen-presenting cell;
KW immunogenic; cytokine release; natural killer cell; NK cell activation;
KW cell-mediated immune response; T-cell response; humoral response;
KW B-cell response; antibody production; immune response induction;
KW vaccine; allergy; asthma; infection; bacterial; viral; fungal; protozoal;
KW parasitic; tuberculosis; AIDS; autoimmune disease; lupus erythematosus;
KW rheumatoid arthritis; multiple sclerosis; solid tumour; cancer;
KW immune deficiency; biological warfare agent; cytostatic; antiarthritic;
KW antimicrobial; antiallergic; protozoacide; tuberculostatic;
KW antiasthmatic; dermatological; phosphorothioate; ss.
XX
OS Synthetic.
XX
PN WO200061151-A2.
XX
PD 19-OCT-2000.
XX
PF 12-APR-2000; 2000WO-US09839.
XX
PR 12-APR-1999; 99US-0128898.
XX
PA (KLIN/) KLINMAN D.
PA (ISHI/) ISHII K.
PA (VERT/) VERTHELYI D.
XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-006880/01.
XX
PT Novel oligonucleotides useful for the prevention and treatment of
PT allergies, cancer, and autoimmune disorders and for ameliorating
PT symptoms resulting from exposure to a bio-warfare agent -
XX
PS Claim 4; Page 30; 46pp; English.
XX
CC The invention relates to novel immunogenic CpG oligodeoxynucleotides
CC (AAC80581-C80723). The oligonucleotide are at least 10 bases long
CC and comprise one of the generic sequences 5'-NNNT-CpG-WNNN-3' or
CC 5'-RY-CpG-RY-3'. The central CpG motif is unmethylated, and the
CC oligonucleotides optionally have phosphorothioate linkages which make
CC them more resistant to degradation. The invention also relates to an
CC oligonucleotide delivery complex comprising an oligonucleotide of the
CC invention and a targetting agent, and a pharmaceutical composition
CC comprising the oligonucleotide delivery complex. The oligonucleotides
CC are able to induce either a cell-mediated (T-cell) response or a humoral
CC (B-cell, antibody) response, with oligonucleotides of the sequence
CC 5'-RY-CpG-RY-3' being able to induce a cell-mediated response, and those
CC of the sequence 5'-NNNT-CpG-WNNN-3' being able to induce a humoral
CC response. It is thought that after administration, the oligonucleotide

CC acts on antigen-presenting cells (e.g., macrophages and dendritic
CC cells), which then release cytokines, leading to activation of natural
CC killer (NK) cells. A cell-mediated or humoral response can then occur by
CC activation of T- or B-cells. The induction of an immune response is
CC useful for treating, preventing or ameliorating an allergic reaction
CC (preferably asthma), or an infection, where an immunogenic CpG
CC oligonucleotide is administered either alone or in combination with an
CC anti-allergenic agent or anti-infectious agent. The allergic conditions
CC which may be treated include eczema, allergic rhinitis, hayfever,
CC urticaria, food allergies and other atopic conditions, and the
CC infections which may be treated include viral, bacterial, fungal and
CC protozoal infections such as tuberculosis, AIDS, leishmania and
CC schistosomiasis. Immune response induction may also be used in the
CC treatment of an autoimmune disorder (e.g., lupus erythematosus,
CC rheumatoid arthritis and multiple sclerosis), a disease associated with
CC immune system deficiency, and symptoms resulting from exposure to an
CC agent of biological warfare. An immunogenic CpG oligonucleotide, either
CC alone or in combination with an anti-cancer agent, is useful for treating
CC solid tumour cancer. The induction of an immune response is used in
CC antisense therapy and to improve the efficacy of a vaccine. The
CC oligonucleotide is preferably administered to lymphocytes ex vivo,
CC producing activated lymphocytes which are then administered to the host.
CC The present sequence represents an immunogenic CpG oligodeoxynucleotide
CC of the invention.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

Query Match 100.0%; Score 20; DB 22; Length 20;
Best Local Similarity 100.0%; Pred. No. 2;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 12
AAC80652
ID AAC80652 standard; DNA; 20 BP.
XX
AC AAC80652;
XX
DT 14-FEB-2001 (first entry)
XX
DE Immunogenic CpG oligodeoxynucleotide, SEQ ID NO:72.
XX
KW CpG oligodeoxynucleotide; unmethylated; antigen-presenting cell;
KW immunogenic; cytokine release; natural killer cell; NK cell activation;
KW cell-mediated immune response; T-cell response; humoral response;
KW B-cell response; antibody production; immune response induction;
KW vaccine; allergy; asthma; infection; bacterial; viral; fungal; protozoal;
KW parasitic; tuberculosis; AIDS; autoimmune disease; lupus erythematosus;
KW rheumatoid arthritis; multiple sclerosis; solid tumour; cancer;
KW immune deficiency; biological warfare agent; cytostatic; antiarthritic;
KW antimicrobial; antiallergic; protozoacide; tuberculostatic;
KW antiasthmatic; dermatological; phosphorothioate; ss.
XX
OS Synthetic.
XX
PN WO200061151-A2.
XX
PD 19-OCT-2000.
XX
PF 12-APR-2000; 2000WO-US09839.
XX
PR 12-APR-1999; 99US-0128898.
XX
PA (KLIN/) KLINMAN D.
PA (ISHI/) ISHII K.
PA (VERT/) VERTHELYI D.
XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-006880/01.
XX
PT Novel oligonucleotides useful for the prevention and treatment of
PT allergies, cancer, and autoimmune disorders and for ameliorating
PT symptoms resulting from exposure to a bio-warfare agent -
XX
PS Claim 4; Page 35; 46pp; English.
XX
CC The invention relates to novel immunogenic CpG oligodeoxynucleotides
CC (AAC80581-C80723). The oligonucleotide are at least 10 bases long
CC and comprise one of the generic sequences 5'-NNNT-CpG-WNNN-3' or
CC 5'-RY-CpG-RY-3'. The central CpG motif is unmethylated, and the
CC oligonucleotides optionally have phosphorothioate linkages which make
CC them more resistant to degradation. The invention also relates to an
CC oligonucleotide delivery complex comprising an oligonucleotide of the
CC invention and a targetting agent, and a pharmaceutical composition
CC comprising the oligonucleotide delivery complex. The oligonucleotides
CC are able to induce either a cell-mediated (T-cell) response or a humoral
CC (B-cell, antibody) response, with oligonucleotides of the sequence
CC 5'-RY-CpG-RY-3' being able to induce a cell-mediated response, and those
CC of the sequence 5'-NNNT-CpG-WNNN-3' being able to induce a humoral
CC response. It is thought that after administration, the oligonucleotide
CC acts on antigen-presenting cells (e.g., macrophages and dendritic
CC cells), which then release cytokines, leading to activation of natural
CC killer (NK) cells. A cell-mediated or humoral response can then occur by
CC activation of T- or B-cells. The induction of an immune response is
CC useful for treating, preventing or ameliorating an allergic reaction
CC (preferably asthma), or an infection, where an immunogenic CpG
CC oligonucleotide is administered either alone or in combination with an
CC anti-allergenic agent or anti-infectious agent. The allergic conditions
CC which may be treated include eczema, allergic rhinitis, hayfever,
CC urticaria, food allergies and other atopic conditions, and the
CC infections which may be treated include viral, bacterial, fungal and
CC protozoal infections such as tuberculosis, AIDS, leishmania and
CC schistosomiasis. Immune response induction may also be used in the
CC treatment of an autoimmune disorder (e.g., lupus erythematosus,
CC rheumatoid arthritis and multiple sclerosis), a disease associated with
CC immune system deficiency, and symptoms resulting from exposure to an
CC agent of biological warfare. An immunogenic CpG oligonucleotide, either
CC alone or in combination with an anti-cancer agent, is useful for treating
CC solid tumour cancer. The induction of an immune response is used in
CC antisense therapy and to improve the efficacy of a vaccine. The
CC oligonucleotide is preferably administered to lymphocytes ex vivo,
CC producing activated lymphocytes which are then administered to the host.
CC The present sequence represents an immunogenic CpG oligodeoxynucleotide
CC of the invention.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

Query Match 100.0%; Score 20; DB 22; Length 20;
Best Local Similarity 100.0%; Pred. No. 2;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 13
ABK46460
ID ABK46460 standard; DNA; 20 BP.
XX
AC ABK46460;
XX
DT 05-JUN-2002 (first entry)
XX
DE Immunostimulatory unmethylated CpG oligodideoxynucleotide #50.
XX
KW unmethylated CpG; oligdideoxynucleotide; ODN; virucide; vaccine;
KW Paramyxoviridae; F protein; respiratory syncytial virus; RSV;
KW viral bronchiolitis; pneumonia; infectious pulmonary disease;
KW bronchopulmonary dysplasia; congenital heart condition; ss.
XX

OS Synthetic.
XX
PN WO200211761-A2.
XX
PD 14-FEB-2002.
XX
PF 09-AUG-2001; 2001WO-US41633.
XX
PR 10-AUG-2000; 2000US-224011P.
PR 01-SEP-2000; 2000US-229307P.
XX
PA (JACK-) JACKSON FOUND ADVANCEMENT MILITARY MED.
XX
PI Mond JJ, Prince G, Klinman DM;
XX
DR WPI; 2002-227118/28.
XX
PT Vaccine for immunising patient against respiratory syncytial virus, has
PT epitopes of Paramyxoviridae F protein, and cytosine followed by guanine
PT linked by phosphate bond-oligodideoxynucleotides -
XX
PS Claim 4; Page 8; 30pp; English.
XX
CC The invention describes a vaccine comprising one or more epitopes of a
CC Paramyxoviridae F protein, and one or more CpG (cytosine followed by
CC guanine linked by phosphate bond)-oligodideoxynucleotides (ODNs). The
CC vaccine is useful for vaccinating a patient especially against viruses
CC of the Paramyxoviridae family e.g. respiratory syncytial virus (RSV),
CC the primary cause of viral bronchiolitis and pneumonia in infants and
CC children, and infectious pulmonary disease in infants. RSV has been
CC particularly implicated in death of infants that are premature, have
CC bronchopulmonary dysplasia, or congenital heart conditions. This
CC sequence represents an oligodideoxynucleotide that can be used in the
CC creation of the vaccine.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

Query Match 100.0%; Score 20; DB 24; Length 20;
Best Local Similarity 100.0%; Pred. No. 2;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 14
ABK46462
ID ABK46462 standard; DNA; 20 BP.
XX
AC ABK46462;
XX
DT 05-JUN-2002 (first entry)
XX
DE Immunostimulatory unmethylated CpG oligodideoxynucleotide #52.
XX
KW unmethylated CpG; oligdideoxynucleotide; ODN; virucide; vaccine;
KW Paramyxoviridae; F protein; respiratory syncytial virus; RSV;
KW viral bronchiolitis; pneumonia; infectious pulmonary disease;
KW bronchopulmonary dysplasia; congenital heart condition; ss.
XX
OS Synthetic.
XX
PN WO200211761-A2.
XX
PD 14-FEB-2002.
XX
PF 09-AUG-2001; 2001WO-US41633.
XX
PR 10-AUG-2000; 2000US-224011P.
PR 01-SEP-2000; 2000US-229307P.
XX
PA (JACK-) JACKSON FOUND ADVANCEMENT MILITARY MED.
XX
PI Mond JJ, Prince G, Klinman DM;
XX
DR WPI; 2002-227118/28.
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PT epitopes of Paramyxoviridae F protein, and cytosine followed by guanine
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PS Claim 4; Page 8; 30pp; English.
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CC Paramyxoviridae F protein, and one or more CpG (cytosine followed by
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CC vaccine is useful for vaccinating a patient especially against viruses
CC of the Paramyxoviridae family e.g. respiratory syncytial virus (RSV),
CC the primary cause of viral bronchiolitis and pneumonia in infants and
CC children, and infectious pulmonary disease in infants. RSV has been
CC particularly implicated in death of infants that are premature, have
CC bronchopulmonary dysplasia, or congenital heart conditions. This
CC sequence represents an oligodideoxynucleotide that can be used in the
CC creation of the vaccine.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

Query Match 100.0%; Score 20; DB 24; Length 20;
Best Local Similarity 100.0%; Pred. No. 2;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 15
ABK46465
ID ABK46465 standard; DNA; 20 BP.
XX
AC ABK46465;
XX
DT 05-JUN-2002 (first entry)
XX
DE Immunostimulatory unmethylated CpG oligodideoxynucleotide #55.
XX
KW unmethylated CpG; oligdideoxynucleotide; ODN; virucide; vaccine;
KW Paramyxoviridae; F protein; respiratory syncytial virus; RSV;
KW viral bronchiolitis; pneumonia; infectious pulmonary disease;
KW bronchopulmonary dysplasia; congenital heart condition; ss.
XX
OS Synthetic.
XX
PN WO200211761-A2.
XX
PD 14-FEB-2002.
XX
PF 09-AUG-2001; 2001WO-US41633.
XX
PR 10-AUG-2000; 2000US-224011P.
PR 01-SEP-2000; 2000US-229307P.
XX
PA (JACK-) JACKSON FOUND ADVANCEMENT MILITARY MED.
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PI Mond JJ, Prince G, Klinman DM;
XX
DR WPI; 2002-227118/28.
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PT epitopes of Paramyxoviridae F protein, and cytosine followed by guanine
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PS Claim 4; Page 8; 30pp; English.
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CC vaccine is useful for vaccinating a patient especially against viruses
CC of the Paramyxoviridae family e.g. respiratory syncytial virus (RSV),
CC the primary cause of viral bronchiolitis and pneumonia in infants and
CC children, and infectious pulmonary disease in infants. RSV has been
CC particularly implicated in death of infants that are premature, have
CC bronchopulmonary dysplasia, or congenital heart conditions. This
CC sequence represents an oligodideoxynucleotide that can be used in the
CC creation of the vaccine.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

Query Match 100.0%; Score 20; DB 24; Length 20;
Best Local Similarity 100.0%; Pred. No. 2;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

Search completed: January 20, 2004, 17:31:47
Job time : 125.706 secs

GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: January 20, 2004, 16:34:44 ; Search time 32.9412 Seconds
(without alignments)
267.983 Million cell updates/sec

Title: US-10-068-160-1
Perfect score: 20
Sequence: 1 ggtgcatcgatgcaggggggg 20

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 569978 seqs, 220691566 residues

Total number of hits satisfying chosen parameters: 1139956

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued_Patents_NA:*
1: /cgn2_6/ptodata/2/ina/5A_COMB.seq:*
2: /cgn2_6/ptodata/2/ina/5B_COMB.seq:*
3: /cgn2_6/ptodata/2/ina/6A_COMB.seq:*
4: /cgn2_6/ptodata/2/ina/6B_COMB.seq:*
5: /cgn2_6/ptodata/2/ina/PCTUS_COMB.seq:*
6: /cgn2_6/ptodata/2/ina/backfiles1.seq:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	Result No.	Score	% Query Match	Length	DB	ID	Description
	1	15.8	79.0	3358	3	US-09-248-571-2	Sequence 2, Appli
	2	15.8	79.0	3358	4	US-09-553-736-2	Sequence 2, Appli
c	3	15.2	76.0	1584	4	US-09-252-991A-7138	Sequence 7138, Ap
c	4	15.2	76.0	1794	4	US-09-252-991A-7259	Sequence 7259, Ap
	5	15.2	76.0	1872	4	US-09-252-991A-7359	Sequence 7359, Ap
	6	14.8	74.0	622	3	US-09-129-030-46	Sequence 46, Appl
c	7	14.4	72.0	759	4	US-09-252-991A-1486	Sequence 1486, Ap
c	8	14.4	72.0	1086	4	US-09-252-991A-13644	Sequence 13644, A
c	9	14.4	72.0	1092	4	US-09-252-991A-13444	Sequence 13444, A
	10	14.4	72.0	1194	4	US-09-252-991A-13697	Sequence 13697, A
	11	14.4	72.0	1308	4	US-09-252-991A-1592	Sequence 1592, Ap
c	12	14.4	72.0	1356	4	US-09-252-991A-1425	Sequence 1425, Ap
	13	14.4	72.0	3591	4	US-09-252-991A-1690	Sequence 1690, Ap
c	14	14.4	72.0	5496	4	US-09-462-284-1	Sequence 1, Appli
c	15	14.4	72.0	32654	4	US-09-801-191A-3	Sequence 3, Appli
c	16	14.4	72.0	1664976	4	US-08-916-421B-1	Sequence 1, Appli
	17	14.4	72.0	4403765	3	US-09-103-840A-2	Sequence 2, Appli
	18	14.4	72.0	4411529	3	US-09-103-840A-1	Sequence 1, Appli
c	19	14.2	71.0	339	4	US-09-107-532A-3414	Sequence 3414, Ap
	20	14.2	71.0	589	1	US-08-454-196-3	Sequence 3, Appli
	21	14.2	71.0	589	3	US-09-064-033-3	Sequence 3, Appli
	22	14.2	71.0	589	4	US-09-291-046-3	Sequence 3, Appli
	23	14.2	71.0	1020	4	US-09-107-532A-1250	Sequence 1250, Ap
	24	14.2	71.0	1029	2	US-08-743-637B-191	Sequence 191, App
	25	14.2	71.0	1128	4	US-09-107-532A-210	Sequence 210, App
	26	14.2	71.0	1140	1	US-08-454-196-1	Sequence 1, Appli
	27	14.2	71.0	1140	3	US-09-064-033-1	Sequence 1, Appli
	28	14.2	71.0	1140	4	US-09-291-046-1	Sequence 1, Appli
	29	14.2	71.0	1607	4	US-09-328-857A-1	Sequence 1, Appli
	30	14.2	71.0	1627	1	US-08-615-170-2	Sequence 2, Appli
	31	14.2	71.0	1666	1	US-08-615-170-4	Sequence 4, Appli
c	32	14.2	71.0	2728	3	US-09-188-930-213	Sequence 213, App
c	33	14.2	71.0	2728	4	US-09-312-283C-213	Sequence 213, App
	34	14.2	71.0	2820	5	PCT-US93-11725-1	Sequence 1, Appli
c	35	14.2	71.0	28958	1	US-08-258-261B-6	Sequence 6, Appli
c	36	14.2	71.0	28958	1	US-08-456-837-6	Sequence 6, Appli
c	37	14.2	71.0	28958	1	US-08-457-342-6	Sequence 6, Appli
c	38	14.2	71.0	28958	1	US-08-457-646A-6	Sequence 6, Appli
c	39	14.2	71.0	28958	1	US-08-458-076A-6	Sequence 6, Appli
c	40	14.2	71.0	28958	1	US-08-764-233A-4	Sequence 4, Appli
c	41	14.2	71.0	28958	1	US-08-457-335A-6	Sequence 6, Appli
c	42	14.2	71.0	28958	1	US-08-729-214-6	Sequence 6, Appli
c	43	14.2	71.0	28958	3	US-09-028-934-6	Sequence 6, Appli
c	44	14.2	71.0	42325	4	US-08-311-731A-131	Sequence 131, App
c	45	14.2	71.0	49377	1	US-08-764-233A-1	Sequence 1, Appli

ALIGNMENTS

RESULT 1
US-09-248-571-2
; Sequence 2, Application US/09248571
; Patent No. 6136539
; GENERAL INFORMATION:
; APPLICANT: BASBAUM, CAROL
; APPLICANT: GALLUP, MARIANNE
; APPLICANT: DAIZONG, LI
; APPLICANT: GEBREMICHAEL, ASSEFA
; APPLICANT: GENSCH, ERIN
; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR INHIBITION OF MUC-5 MUCIN
; TITLE OF INVENTION: GENE EXPRESSION
; FILE REFERENCE: UCSF12/02
; CURRENT APPLICATION NUMBER: US/09/248,571
; CURRENT FILING DATE: 1999-02-11
; EARLIER APPLICATION NUMBER: 60/074,398
; EARLIER FILING DATE: 1998-02-11
; NUMBER OF SEQ ID NOS: 22
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 2
; LENGTH: 3358
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-248-571-2

Query Match 79.0%; Score 15.8; DB 3; Length 3358;
Best Local Similarity 89.5%; Pred. No. 58;
Matches 17; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

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Qy          2 GTGCATCGATGCAGGGGGG 20
              ||||| | ||||||||||
Db        998 GTGCACCCATGCAGGGGGG 1016
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RESULT 2
US-09-553-736-2
; Sequence 2, Application US/09553736
; Patent No. 6440672
; GENERAL INFORMATION:
; APPLICANT: BASBAUM, Carol
; APPLICANT: GALLUP, Marianne
; APPLICANT: DAIZONG, Li
; APPLICANT: GEBREMICHAEL, Assefa
; APPLICANT: GENSCH, Erin
; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE INHIBITION OF MUC-5
; TITLE OF INVENTION: MUCIN GENE EXPRESSION
; FILE REFERENCE: UCSF-012/03US
; CURRENT APPLICATION NUMBER: US/09/553,736
; CURRENT FILING DATE: 2000-04-20
; PRIOR APPLICATION NUMBER: US 09/248,571

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;  PRIOR FILING DATE:  1999-02-11
;  PRIOR APPLICATION NUMBER:  US 60/074,398
;  PRIOR FILING DATE:  1998-02-11
;  NUMBER OF SEQ ID NOS:  22
;  SOFTWARE:  PatentIn Ver. 2.1
; SEQ ID NO 2
;   LENGTH: 3358
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-553-736-2

  Query Match             79.0%;  Score 15.8;  DB 4;  Length 3358;
  Best Local Similarity   89.5%;  Pred. No. 58;
  Matches   17;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          2 GTGCATCGATGCAGGGGGG 20
              ||||| | ||||||||||
Db        998 GTGCACCCATGCAGGGGGG 1016


RESULT 3
US-09-252-991A-7138/c
; Sequence 7138, Application US/09252991A
; Patent No. 6551795
; GENERAL INFORMATION:
;  APPLICANT:  Marc J. Rubenfield et al.
;  TITLE OF INVENTION:  NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
;  TITLE OF INVENTION:  AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
;  FILE REFERENCE:  107196.136
;  CURRENT APPLICATION NUMBER: US/09/252,991A
;  CURRENT FILING DATE:  1999-02-18
;  PRIOR APPLICATION NUMBER:  US 60/074,788
;  PRIOR FILING DATE:  1998-02-18
;  PRIOR APPLICATION NUMBER:  US 60/094,190
;  PRIOR FILING DATE:  1998-07-27
;  NUMBER OF SEQ ID NOS:  33142
; SEQ ID NO 7138
;   LENGTH: 1584
;   TYPE: DNA
;   ORGANISM: Pseudomonas aeruginosa
US-09-252-991A-7138

  Query Match             76.0%;  Score 15.2;  DB 4;  Length 1584;
  Best Local Similarity   85.0%;  Pred. No. 1.1e+02;
  Matches   17;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              || ||| ||||||||||  ||
Db       1521 GGCGCAGCGATGCAGGGTGG 1502


RESULT 4
US-09-252-991A-7259/c
; Sequence 7259, Application US/09252991A
; Patent No. 6551795
; GENERAL INFORMATION:
;  APPLICANT:  Marc J. Rubenfield et al.
;  TITLE OF INVENTION:  NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
;  TITLE OF INVENTION:  AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
;  FILE REFERENCE:  107196.136
;  CURRENT APPLICATION NUMBER: US/09/252,991A
;  CURRENT FILING DATE:  1999-02-18
;  PRIOR APPLICATION NUMBER:  US 60/074,788
;  PRIOR FILING DATE:  1998-02-18
;  PRIOR APPLICATION NUMBER:  US 60/094,190
;  PRIOR FILING DATE:  1998-07-27
;  NUMBER OF SEQ ID NOS:  33142
; SEQ ID NO 7259
;   LENGTH: 1794
;   TYPE: DNA
;   ORGANISM: Pseudomonas aeruginosa
US-09-252-991A-7259

  Query Match             76.0%;  Score 15.2;  DB 4;  Length 1794;
  Best Local Similarity   85.0%;  Pred. No. 1.1e+02;
  Matches   17;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              || ||| ||||||||||  ||
Db        208 GGCGCAGCGATGCAGGGTGG 189


RESULT 5
US-09-252-991A-7359
; Sequence 7359, Application US/09252991A
; Patent No. 6551795
; GENERAL INFORMATION:
;  APPLICANT:  Marc J. Rubenfield et al.
;  TITLE OF INVENTION:  NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
;  TITLE OF INVENTION:  AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
;  FILE REFERENCE:  107196.136
;  CURRENT APPLICATION NUMBER: US/09/252,991A
;  CURRENT FILING DATE:  1999-02-18
;  PRIOR APPLICATION NUMBER:  US 60/074,788
;  PRIOR FILING DATE:  1998-02-18
;  PRIOR APPLICATION NUMBER:  US 60/094,190
;  PRIOR FILING DATE:  1998-07-27
;  NUMBER OF SEQ ID NOS:  33142
; SEQ ID NO 7359
;   LENGTH: 1872
;   TYPE: DNA
;   ORGANISM: Pseudomonas aeruginosa
US-09-252-991A-7359

  Query Match             76.0%;  Score 15.2;  DB 4;  Length 1872;
  Best Local Similarity   85.0%;  Pred. No. 1.1e+02;
  Matches   17;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              || ||| ||||||||||  ||
Db        271 GGCGCAGCGATGCAGGGTGG 290


RESULT 6
US-09-129-030-46
; Sequence 46, Application US/09129030A
; Patent No. 6242221
; GENERAL INFORMATION:
;  APPLICANT: COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATION
;  TITLE OF INVENTION: GENOMIC PPO CLONES
;  FILE REFERENCE: 57072-PCT-US
;  CURRENT APPLICATION NUMBER: US/09/129,030A
;  CURRENT FILING DATE: 1998-08-04
;  EARLIER APPLICATION NUMBER: AU PN7856
;  EARLIER FILING DATE: 1996-02-05
;  EARLIER APPLICATION NUMBER: AU PO2361
;  EARLIER FILING DATE: 1996-09-16
;  EARLIER APPLICATION NUMBER: PCT/AU97/00041
;  EARLIER FILING DATE: 1997-01-24
;  NUMBER OF SEQ ID NOS: 66
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 46
;   LENGTH: 622
;   TYPE: DNA
;   ORGANISM: RICE
;   FEATURE:
;   NAME/KEY: CDS
;   LOCATION: (1)..(300)
;   FEATURE:
;   NAME/KEY: CDS
;   LOCATION: (303)..(620)
US-09-129-030-46

  Query Match             74.0%;  Score 14.8;  DB 3;  Length 622;
  Best Local Similarity   88.9%;  Pred. No. 1.6e+02;
  Matches   16;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;
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```
Qy          2 GTGCATCGATGCAGGGGG 19
              ||||||||||||||| | |
Db        217 GTGCATCGATGCAGCGCG 234


RESULT 7
US-09-252-991A-1486/c
; Sequence 1486, Application US/09252991A
; Patent No. 6551795
; GENERAL INFORMATION:
;  APPLICANT:  Marc J. Rubenfield et al.
;  TITLE OF INVENTION:  NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
;  TITLE OF INVENTION:  AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
;  FILE REFERENCE:  107196.136
;  CURRENT APPLICATION NUMBER: US/09/252,991A
;  CURRENT FILING DATE:  1999-02-18
;  PRIOR APPLICATION NUMBER:  US 60/074,788
;  PRIOR FILING DATE:  1998-02-18
;  PRIOR APPLICATION NUMBER:  US 60/094,190
;  PRIOR FILING DATE:  1998-07-27
;  NUMBER OF SEQ ID NOS:  33142
; SEQ ID NO 1486
;   LENGTH: 759
;   TYPE: DNA
;   ORGANISM: Pseudomonas aeruginosa
US-09-252-991A-1486

  Query Match             72.0%;  Score 14.4;  DB 4;  Length 759;
  Best Local Similarity   93.8%;  Pred. No. 2.5e+02;
  Matches   15;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGG 16
              ||||| ||||||||||
Db        374 GGTGCGTCGATGCAGG 359


RESULT 8
US-09-252-991A-13644/c
; Sequence 13644, Application US/09252991A
; Patent No. 6551795
; GENERAL INFORMATION:
;  APPLICANT:  Marc J. Rubenfield et al.
;  TITLE OF INVENTION:  NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
;  TITLE OF INVENTION:  AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
;  FILE REFERENCE:  107196.136
;  CURRENT APPLICATION NUMBER: US/09/252,991A
;  CURRENT FILING DATE:  1999-02-18
;  PRIOR APPLICATION NUMBER:  US 60/074,788
;  PRIOR FILING DATE:  1998-02-18
;  PRIOR APPLICATION NUMBER:  US 60/094,190
;  PRIOR FILING DATE:  1998-07-27
;  NUMBER OF SEQ ID NOS:  33142
; SEQ ID NO 13644
;   LENGTH: 1086
;   TYPE: DNA
;   ORGANISM: Pseudomonas aeruginosa
US-09-252-991A-13644

  Query Match             72.0%;  Score 14.4;  DB 4;  Length 1086;
  Best Local Similarity   93.8%;  Pred. No. 2.6e+02;
  Matches   15;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          4 GCATCGATGCAGGGGG 19
              |||||||||| |||||
Db        264 GCATCGATGCCGGGGG 249


RESULT 9
US-09-252-991A-13444/c
; Sequence 13444, Application US/09252991A
; Patent No. 6551795
; GENERAL INFORMATION:
;  APPLICANT:  Marc J. Rubenfield et al.
;  TITLE OF INVENTION:  NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
;  TITLE OF INVENTION:  AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
;  FILE REFERENCE:  107196.136
;  CURRENT APPLICATION NUMBER: US/09/252,991A
;  CURRENT FILING DATE:  1999-02-18
;  PRIOR APPLICATION NUMBER:  US 60/074,788
;  PRIOR FILING DATE:  1998-02-18
;  PRIOR APPLICATION NUMBER:  US 60/094,190
;  PRIOR FILING DATE:  1998-07-27
;  NUMBER OF SEQ ID NOS:  33142
; SEQ ID NO 13444
;   LENGTH: 1092
;   TYPE: DNA
;   ORGANISM: Pseudomonas aeruginosa
US-09-252-991A-13444

  Query Match             72.0%;  Score 14.4;  DB 4;  Length 1092;
  Best Local Similarity   93.8%;  Pred. No. 2.6e+02;
  Matches   15;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          4 GCATCGATGCAGGGGG 19
              |||||||||| |||||
Db        305 GCATCGATGCCGGGGG 290


RESULT 10
US-09-252-991A-13697
; Sequence 13697, Application US/09252991A
; Patent No. 6551795
; GENERAL INFORMATION:
;  APPLICANT:  Marc J. Rubenfield et al.
;  TITLE OF INVENTION:  NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
;  TITLE OF INVENTION:  AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
;  FILE REFERENCE:  107196.136
;  CURRENT APPLICATION NUMBER: US/09/252,991A
;  CURRENT FILING DATE:  1999-02-18
;  PRIOR APPLICATION NUMBER:  US 60/074,788
;  PRIOR FILING DATE:  1998-02-18
;  PRIOR APPLICATION NUMBER:  US 60/094,190
;  PRIOR FILING DATE:  1998-07-27
;  NUMBER OF SEQ ID NOS:  33142
; SEQ ID NO 13697
;   LENGTH: 1194
;   TYPE: DNA
;   ORGANISM: Pseudomonas aeruginosa
US-09-252-991A-13697

  Query Match             72.0%;  Score 14.4;  DB 4;  Length 1194;
  Best Local Similarity   93.8%;  Pred. No. 2.6e+02;
  Matches   15;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          4 GCATCGATGCAGGGGG 19
              |||||||||| |||||
Db        971 GCATCGATGCCGGGGG 986


RESULT 11
US-09-252-991A-1592
; Sequence 1592, Application US/09252991A
; Patent No. 6551795
; GENERAL INFORMATION:
;  APPLICANT:  Marc J. Rubenfield et al.
;  TITLE OF INVENTION:  NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
;  TITLE OF INVENTION:  AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
;  FILE REFERENCE:  107196.136
;  CURRENT APPLICATION NUMBER: US/09/252,991A
;  CURRENT FILING DATE:  1999-02-18
;  PRIOR APPLICATION NUMBER:  US 60/074,788
;  PRIOR FILING DATE:  1998-02-18
;  PRIOR APPLICATION NUMBER:  US 60/094,190
;  PRIOR FILING DATE:  1998-07-27
;  NUMBER OF SEQ ID NOS:  33142
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; SEQ ID NO 1592
;   LENGTH: 1308
;   TYPE: DNA
;   ORGANISM: Pseudomonas aeruginosa
US-09-252-991A-1592

  Query Match             72.0%;  Score 14.4;  DB 4;  Length 1308;
  Best Local Similarity   93.8%;  Pred. No. 2.6e+02;
  Matches   15;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGG 16
              ||||| ||||||||||
Db        367 GGTGCGTCGATGCAGG 382


RESULT 12
US-09-252-991A-1425/c
; Sequence 1425, Application US/09252991A
; Patent No. 6551795
; GENERAL INFORMATION:
;  APPLICANT:  Marc J. Rubenfield et al.
;  TITLE OF INVENTION:  NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
;  TITLE OF INVENTION:  AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
;  FILE REFERENCE:  107196.136
;  CURRENT APPLICATION NUMBER: US/09/252,991A
;  CURRENT FILING DATE:  1999-02-18
;  PRIOR APPLICATION NUMBER:  US 60/074,788
;  PRIOR FILING DATE:  1998-02-18
;  PRIOR APPLICATION NUMBER:  US 60/094,190
;  PRIOR FILING DATE:  1998-07-27
;  NUMBER OF SEQ ID NOS:  33142
; SEQ ID NO 1425
;   LENGTH: 1356
;   TYPE: DNA
;   ORGANISM: Pseudomonas aeruginosa
US-09-252-991A-1425

  Query Match             72.0%;  Score 14.4;  DB 4;  Length 1356;
  Best Local Similarity   93.8%;  Pred. No. 2.7e+02;
  Matches   15;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGG 16
              ||||| ||||||||||
Db        981 GGTGCGTCGATGCAGG 966


RESULT 13
US-09-252-991A-1690
; Sequence 1690, Application US/09252991A
; Patent No. 6551795
; GENERAL INFORMATION:
;  APPLICANT:  Marc J. Rubenfield et al.
;  TITLE OF INVENTION:  NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
;  TITLE OF INVENTION:  AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
;  FILE REFERENCE:  107196.136
;  CURRENT APPLICATION NUMBER: US/09/252,991A
;  CURRENT FILING DATE:  1999-02-18
;  PRIOR APPLICATION NUMBER:  US 60/074,788
;  PRIOR FILING DATE:  1998-02-18
;  PRIOR APPLICATION NUMBER:  US 60/094,190
;  PRIOR FILING DATE:  1998-07-27
;  NUMBER OF SEQ ID NOS:  33142
; SEQ ID NO 1690
;   LENGTH: 3591
;   TYPE: DNA
;   ORGANISM: Pseudomonas aeruginosa
US-09-252-991A-1690

  Query Match             72.0%;  Score 14.4;  DB 4;  Length 3591;
  Best Local Similarity   93.8%;  Pred. No. 2.9e+02;
  Matches   15;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGG 16
              ||||| ||||||||||
Db        293 GGTGCGTCGATGCAGG 308


RESULT 14
US-09-462-284-1/c
; Sequence 1, Application US/09462284
; Patent No. 6309868
; GENERAL INFORMATION:
;  APPLICANT:  Nestec S.A.
;  APPLICANT:  Monod, Michel
;  APPLICANT:  Doumas, Agnes
;  APPLICANT:  Affolter, Micheal
;  APPLICANT:  Van Den Broek, Peter
;  TITLE OF INVENTION:  CLONING OF THE
;  TITLE OF INVENTION:  PROLYL-DIPEPTIDYL-PEPTIDASE FROM
;  TITLE OF INVENTION:  ASPERGILLUS ORYZAE
;  FILE REFERENCE:  8265-298
;  CURRENT APPLICATION NUMBER: US/09/462,284
;  CURRENT FILING DATE:  2000-01-03
;  NUMBER OF SEQ ID NOS:  9
;  SOFTWARE:  FastSEQ for Windows Version 4.0
; SEQ ID NO 1
;   LENGTH: 5496
;   TYPE: DNA
;   ORGANISM: Fungus
US-09-462-284-1

  Query Match             72.0%;  Score 14.4;  DB 4;  Length 5496;
  Best Local Similarity   93.8%;  Pred. No. 3e+02;
  Matches   15;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          3 TGCATCGATGCAGGGG 18
              ||||||||| ||||||
Db       3745 TGCATCGATCCAGGGG 3730


RESULT 15
US-09-801-191A-3/c
; Sequence 3, Application US/09801191A
; Patent No. 6537788
; GENERAL INFORMATION:
;  APPLICANT: YE, Jane et al
;  TITLE OF INVENTION: ISOLATED HUMAN KINASE PROTEINS, NUCLEIC
;  TITLE OF INVENTION:  ACID MOLECULES ENCODING HUMAN KINASE PROTEINS, AND USES
;  TITLE OF INVENTION:  THEREOF
;  FILE REFERENCE: CL001159
;  CURRENT APPLICATION NUMBER: US/09/801,191A
;  CURRENT FILING DATE:  2001-03-08
;  NUMBER OF SEQ ID NOS: 8
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 3
;   LENGTH: 32654
;   TYPE: DNA
;   ORGANISM: Human
US-09-801-191A-3

  Query Match             72.0%;  Score 14.4;  DB 4;  Length 32654;
  Best Local Similarity   93.8%;  Pred. No. 3.4e+02;
  Matches   15;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          5 CATCGATGCAGGGGGG 20
              |||| ||||||||||
Db      28343 CATCTATGCAGGGGGG 28328


Search completed: January 20, 2004, 17:17:04
Job time : 39.9412 secs
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GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: January 20, 2004, 16:34:44 ; Search time 132.353 Seconds
(without alignments)
532.631 Million cell updates/sec

Title: US-10-068-160-1
Perfect score: 20
Sequence: 1 ggtgcatcgatgcaggggggg 20

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 2324096 seqs, 1762381658 residues

Total number of hits satisfying chosen parameters: 4648192

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published_Applications_NA:*
1: /cgn2_6/ptodata/1/pubpna/US07_PUBCOMB.seq:*
2: /cgn2_6/ptodata/1/pubpna/PCT_NEW_PUB.seq:*
3: /cgn2_6/ptodata/1/pubpna/US06_NEW_PUB.seq:*
4: /cgn2_6/ptodata/1/pubpna/US06_PUBCOMB.seq:*
5: /cgn2_6/ptodata/1/pubpna/US07_NEW_PUB.seq:*
6: /cgn2_6/ptodata/1/pubpna/PCTUS_PUBCOMB.seq:*
7: /cgn2_6/ptodata/1/pubpna/US08_NEW_PUB.seq:*
8: /cgn2_6/ptodata/1/pubpna/US08_PUBCOMB.seq:*
9: /cgn2_6/ptodata/1/pubpna/US09A_PUBCOMB.seq:*
10: /cgn2_6/ptodata/1/pubpna/US09B_PUBCOMB.seq:*
11: /cgn2_6/ptodata/1/pubpna/US09C_PUBCOMB.seq:*
12: /cgn2_6/ptodata/1/pubpna/US09_NEW_PUB.seq:*
13: /cgn2_6/ptodata/1/pubpna/US09_NEW_PUB.seq2:*
14: /cgn2_6/ptodata/1/pubpna/US10A_PUBCOMB.seq:*
15: /cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
16: /cgn2_6/ptodata/1/pubpna/US10_NEW_PUB.seq:*
17: /cgn2_6/ptodata/1/pubpna/US60_NEW_PUB.seq:*
18: /cgn2_6/ptodata/1/pubpna/US60_PUBCOMB.seq:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	20	100.0	20	13	US-10-194-035-32	Sequence 32, Appl
2	20	100.0	20	13	US-10-194-035-34	Sequence 34, Appl
3	20	100.0	20	13	US-10-194-035-37	Sequence 37, Appl
4	20	100.0	20	13	US-10-194-035-38	Sequence 38, Appl
5	20	100.0	20	13	US-10-194-035-43	Sequence 43, Appl
6	20	100.0	20	13	US-10-194-035-72	Sequence 72, Appl
7	20	100.0	20	15	US-10-068-160-1	Sequence 1, Appli
8	20	100.0	20	15	US-10-068-160-54	Sequence 54, Appl
9	19	95.0	19	13	US-10-194-035-53	Sequence 53, Appl
10	19	95.0	19	13	US-10-194-035-73	Sequence 73, Appl
11	18.4	92.0	20	13	US-10-194-035-40	Sequence 40, Appl
12	18.4	92.0	20	13	US-10-194-035-81	Sequence 81, Appl
13	18.4	92.0	20	13	US-10-194-035-82	Sequence 82, Appl
14	18.4	92.0	20	13	US-10-194-035-100	Sequence 100, App
15	18.4	92.0	20	13	US-10-194-035-101	Sequence 101, App
16	18.4	92.0	20	13	US-10-194-035-104	Sequence 104, App
17	18.4	92.0	20	13	US-10-194-035-106	Sequence 106, App
18	18.4	92.0	20	13	US-10-194-035-107	Sequence 107, App
19	18.4	92.0	20	15	US-10-068-160-7	Sequence 7, Appli
20	18.4	92.0	20	15	US-10-068-160-11	Sequence 11, Appl
21	18.4	92.0	20	15	US-10-068-160-21	Sequence 21, Appl
22	18.4	92.0	20	15	US-10-068-160-30	Sequence 30, Appl
23	18.4	92.0	20	15	US-10-068-160-35	Sequence 35, Appl
24	18.4	92.0	20	15	US-10-068-160-37	Sequence 37, Appl
25	18.4	92.0	20	15	US-10-068-160-52	Sequence 52, Appl
26	18.4	92.0	20	15	US-10-068-160-53	Sequence 53, Appl
27	18.4	92.0	20	15	US-10-068-160-64	Sequence 64, Appl
28	18.4	92.0	20	15	US-10-068-160-65	Sequence 65, Appl
29	18	90.0	18	15	US-10-068-160-12	Sequence 12, Appl
30	18	90.0	20	15	US-10-068-160-38	Sequence 38, Appl
31	17.4	87.0	19	13	US-10-194-035-22	Sequence 22, Appl
32	17.4	87.0	19	13	US-10-194-035-83	Sequence 83, Appl
33	17.4	87.0	19	13	US-10-194-035-88	Sequence 88, Appl
34	17	85.0	17	13	US-10-194-035-27	Sequence 27, Appl
35	16.8	84.0	20	13	US-10-194-035-39	Sequence 39, Appl
36	16.8	84.0	20	13	US-10-194-035-41	Sequence 41, Appl
37	16.8	84.0	20	13	US-10-194-035-42	Sequence 42, Appl
38	16.8	84.0	20	13	US-10-194-035-90	Sequence 90, Appl
39	16.8	84.0	20	13	US-10-194-035-94	Sequence 94, Appl
40	16.8	84.0	20	13	US-10-194-035-96	Sequence 96, Appl
41	16.8	84.0	20	13	US-10-194-035-102	Sequence 102, App
42	16.8	84.0	20	15	US-10-068-160-2	Sequence 2, Appli
43	16.8	84.0	20	15	US-10-068-160-26	Sequence 26, Appl
44	16.8	84.0	20	15	US-10-068-160-31	Sequence 31, Appl
45	16.8	84.0	20	15	US-10-068-160-40	Sequence 40, Appl

ALIGNMENTS

RESULT 1
US-10-194-035-32
; Sequence 32, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
; APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
; APPLICANT: SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
; APPLICANT: KLINMAN, Dennis
; APPLICANT: ISHII, Ken
; APPLICANT: VERTHELYI, Daniela
; TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
; FILE REFERENCE: 4239-63317
; CURRENT APPLICATION NUMBER: US/10/194,035
; CURRENT FILING DATE: 2002-07-12
; PRIOR APPLICATION NUMBER: PCT/US01/01122
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: US 60/176,115
; PRIOR FILING DATE: 2000-01-14
; NUMBER OF SEQ ID NOS: 119
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 32
; LENGTH: 20
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-32

Query Match 100.0%; Score 20; DB 13; Length 20;
Best Local Similarity 100.0%; Pred. No. 2.1;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20
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RESULT 2

US-10-194-035-34
; Sequence 34, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
; APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
; APPLICANT: SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
; APPLICANT: KLINMAN, Dennis
; APPLICANT: ISHII, Ken
; APPLICANT: VERTHELYI, Daniela
; TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
; FILE REFERENCE: 4239-63317
; CURRENT APPLICATION NUMBER: US/10/194,035
; CURRENT FILING DATE: 2002-07-12
; PRIOR APPLICATION NUMBER: PCT/US01/01122
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: US 60/176,115
; PRIOR FILING DATE: 2000-01-14
; NUMBER OF SEQ ID NOS: 119
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 34
; LENGTH: 20
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-34

Query Match 100.0%; Score 20; DB 13; Length 20;
Best Local Similarity 100.0%; Pred. No. 2.1;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 3
US-10-194-035-37
; Sequence 37, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
; APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
; APPLICANT: SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
; APPLICANT: KLINMAN, Dennis
; APPLICANT: ISHII, Ken
; APPLICANT: VERTHELYI, Daniela
; TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
; FILE REFERENCE: 4239-63317
; CURRENT APPLICATION NUMBER: US/10/194,035
; CURRENT FILING DATE: 2002-07-12
; PRIOR APPLICATION NUMBER: PCT/US01/01122
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: US 60/176,115
; PRIOR FILING DATE: 2000-01-14
; NUMBER OF SEQ ID NOS: 119
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 37
; LENGTH: 20
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-37

Query Match 100.0%; Score 20; DB 13; Length 20;
Best Local Similarity 100.0%; Pred. No. 2.1;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 4
US-10-194-035-38
; Sequence 38, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
; APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
; APPLICANT: SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
; APPLICANT: KLINMAN, Dennis
; APPLICANT: ISHII, Ken
; APPLICANT: VERTHELYI, Daniela
; TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
; FILE REFERENCE: 4239-63317
; CURRENT APPLICATION NUMBER: US/10/194,035
; CURRENT FILING DATE: 2002-07-12
; PRIOR APPLICATION NUMBER: PCT/US01/01122
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: US 60/176,115
; PRIOR FILING DATE: 2000-01-14
; NUMBER OF SEQ ID NOS: 119
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 38
; LENGTH: 20
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-38

Query Match 100.0%; Score 20; DB 13; Length 20;
Best Local Similarity 100.0%; Pred. No. 2.1;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 5
US-10-194-035-43
; Sequence 43, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
; APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
; APPLICANT: SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
; APPLICANT: KLINMAN, Dennis
; APPLICANT: ISHII, Ken
; APPLICANT: VERTHELYI, Daniela
; TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
; FILE REFERENCE: 4239-63317
; CURRENT APPLICATION NUMBER: US/10/194,035
; CURRENT FILING DATE: 2002-07-12
; PRIOR APPLICATION NUMBER: PCT/US01/01122
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: US 60/176,115
; PRIOR FILING DATE: 2000-01-14
; NUMBER OF SEQ ID NOS: 119
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 43
; LENGTH: 20
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-43

Query Match 100.0%; Score 20; DB 13; Length 20;
Best Local Similarity 100.0%; Pred. No. 2.1;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

```
RESULT 6
US-10-194-035-72
; Sequence 72, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
;  APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
;  APPLICANT:  SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
;  APPLICANT:  KLINMAN, Dennis
;  APPLICANT:  ISHII, Ken
;  APPLICANT:  VERTHELYI, Daniela
;  TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
;  FILE REFERENCE: 4239-63317
;  CURRENT APPLICATION NUMBER: US/10/194,035
;  CURRENT FILING DATE:  2002-07-12
;  PRIOR APPLICATION NUMBER: PCT/US01/01122
;  PRIOR FILING DATE: 2001-07-19
;  PRIOR APPLICATION NUMBER: US 60/176,115
;  PRIOR FILING DATE: 2000-01-14
;  NUMBER OF SEQ ID NOS: 119
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 72
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-72

  Query Match             100.0%;  Score 20;  DB 13;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 2.1;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 7
US-10-068-160-1
; Sequence 1, Application US/10068160
; Publication No. US20030060440A1
; GENERAL INFORMATION:
;  APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA, REPRESENTED BY THE
;  APPLICANT:  SECRETARY, DEPARTMENT OF HEALTH AND HUMAN SERVICES
;  APPLICANT:  KLINMAN, Dennis
;  APPLICANT:  ISHII, Ken
;  APPLICANT:  VERTHELYI, Daniela
;  TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
;  FILE REFERENCE: 4239-61999
;  CURRENT APPLICATION NUMBER: US/10/068,160
;  CURRENT FILING DATE:  2002-02-06
;  PRIOR APPLICATION NUMBER: 60/128,898
;  PRIOR FILING DATE: 1999-04-12
;  NUMBER OF SEQ ID NOS: 120
;  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 1
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Oligonucleotide
US-10-068-160-1

  Query Match             100.0%;  Score 20;  DB 15;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 2.1;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 8
US-10-068-160-54
; Sequence 54, Application US/10068160
; Publication No. US20030060440A1
; GENERAL INFORMATION:
;  APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA, REPRESENTED BY THE
;  APPLICANT:  SECRETARY, DEPARTMENT OF HEALTH AND HUMAN SERVICES
;  APPLICANT:  KLINMAN, Dennis
;  APPLICANT:  ISHII, Ken
;  APPLICANT:  VERTHELYI, Daniela
;  TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
;  FILE REFERENCE: 4239-61999
;  CURRENT APPLICATION NUMBER: US/10/068,160
;  CURRENT FILING DATE:  2002-02-06
;  PRIOR APPLICATION NUMBER: 60/128,898
;  PRIOR FILING DATE: 1999-04-12
;  NUMBER OF SEQ ID NOS: 120
;  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 54
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Oligonucleotide
US-10-068-160-54

  Query Match             100.0%;  Score 20;  DB 15;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 2.1;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 9
US-10-194-035-53
; Sequence 53, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
;  APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
;  APPLICANT:  SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
;  APPLICANT:  KLINMAN, Dennis
;  APPLICANT:  ISHII, Ken
;  APPLICANT:  VERTHELYI, Daniela
;  TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
;  FILE REFERENCE: 4239-63317
;  CURRENT APPLICATION NUMBER: US/10/194,035
;  CURRENT FILING DATE:  2002-07-12
;  PRIOR APPLICATION NUMBER: PCT/US01/01122
;  PRIOR FILING DATE: 2001-07-19
;  PRIOR APPLICATION NUMBER: US 60/176,115
;  PRIOR FILING DATE: 2000-01-14
;  NUMBER OF SEQ ID NOS: 119
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 53
;   LENGTH: 19
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-53

  Query Match             95.0%;  Score 19;  DB 13;  Length 19;
  Best Local Similarity   100.0%;  Pred. No. 6.6;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGG 19
              |||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGG 19


RESULT 10
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US-10-194-035-73
; Sequence 73, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
;  APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
;  APPLICANT:  SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
;  APPLICANT:  KLINMAN, Dennis
;  APPLICANT:  ISHII, Ken
;  APPLICANT:  VERTHELYI, Daniela
;  TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
;  FILE REFERENCE: 4239-63317
;  CURRENT APPLICATION NUMBER: US/10/194,035
;  CURRENT FILING DATE:  2002-07-12
;  PRIOR APPLICATION NUMBER: PCT/US01/01122
;  PRIOR FILING DATE: 2001-07-19
;  PRIOR APPLICATION NUMBER: US 60/176,115
;  PRIOR FILING DATE: 2000-01-14
;  NUMBER OF SEQ ID NOS: 119
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 73
;   LENGTH: 19
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-73

  Query Match             95.0%;  Score 19;  DB 13;  Length 19;
  Best Local Similarity   100.0%;  Pred. No. 6.6;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGG 19
              |||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGG 19


RESULT 11
US-10-194-035-40
; Sequence 40, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
;  APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
;  APPLICANT:  SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
;  APPLICANT:  KLINMAN, Dennis
;  APPLICANT:  ISHII, Ken
;  APPLICANT:  VERTHELYI, Daniela
;  TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
;  FILE REFERENCE: 4239-63317
;  CURRENT APPLICATION NUMBER: US/10/194;035
;  CURRENT FILING DATE:  2002-07-12
;  PRIOR APPLICATION NUMBER: PCT/US01/01122
;  PRIOR FILING DATE: 2001-07-19
;  PRIOR APPLICATION NUMBER: US 60/176,115
;  PRIOR FILING DATE: 2000-01-14
;  NUMBER OF SEQ ID NOS: 119
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 40
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-40

  Query Match             92.0%;  Score 18.4;  DB 13;  Length 20;
  Best Local Similarity   95.0%;  Pred. No. 13;
  Matches   19;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              |||||.|||||||||||||||
Db          1 GGTGCGTCGATGCAGGGGGG 20


RESULT 12
US-10-194-035-81
; Sequence 81, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
;  APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
;  APPLICANT:  SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
;  APPLICANT:  KLINMAN, Dennis
;  APPLICANT:  ISHII, Ken
;  APPLICANT:  VERTHELYI, Daniela
;  TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
;  FILE REFERENCE: 4239-63317
;  CURRENT APPLICATION NUMBER: US/10/194,035
;  CURRENT FILING DATE:  2002-07-12
;  PRIOR APPLICATION NUMBER: PCT/US01/01122
;  PRIOR FILING DATE: 2001-07-19
;  PRIOR APPLICATION NUMBER: US 60/176,115
;  PRIOR FILING DATE: 2000-01-14
;  NUMBER OF SEQ ID NOS: 119
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 81
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-81

  Query Match             92.0%;  Score 18.4;  DB 13;  Length 20;
  Best Local Similarity   95.0%;  Pred. No. 13;
  Matches   19;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              |||||.|||||||||||||||
Db          1 GGTGCGTCGATGCAGGGGGG 20


RESULT 13
US-10-194-035-82
; Sequence 82, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
;  APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
;  APPLICANT:  SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
;  APPLICANT:  KLINMAN, Dennis
;  APPLICANT:  ISHII, Ken
;  APPLICANT:  VERTHELYI, Daniela
;  TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
;  FILE REFERENCE: 4239-63317
;  CURRENT APPLICATION NUMBER: US/10/194,035
;  CURRENT FILING DATE:  2002-07-12
;  PRIOR APPLICATION NUMBER: PCT/US01/01122
;  PRIOR FILING DATE: 2001-07-19
;  PRIOR APPLICATION NUMBER: US 60/176,115
;  PRIOR FILING DATE: 2000-01-14
;  NUMBER OF SEQ ID NOS: 119
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 82
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-82

  Query Match             92.0%;  Score 18.4;  DB 13;  Length 20;
  Best Local Similarity   95.0%;  Pred. No. 13;
  Matches   19;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              |||||.|||||||||||||||
Db          1 GGTGCGTCGATGCAGGGGGG 20
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RESULT 14
US-10-194-035-100
; Sequence 100, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
;  APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
;  APPLICANT:  SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
;  APPLICANT:  KLINMAN, Dennis
;  APPLICANT:  ISHII, Ken
;  APPLICANT:  VERTHELYI, Daniela
;  TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
;  FILE REFERENCE: 4239-63317
;  CURRENT APPLICATION NUMBER: US/10/194,035
;  CURRENT FILING DATE:  2002-07-12
;  PRIOR APPLICATION NUMBER: PCT/US01/01122
;  PRIOR FILING DATE: 2001-07-19
;  PRIOR APPLICATION NUMBER: US 60/176,115
;  PRIOR FILING DATE: 2000-01-14
;  NUMBER OF SEQ ID NOS: 119
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 100
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-100

  Query Match             92.0%;  Score 18.4;  DB 13;  Length 20;
  Best Local Similarity   95.0%;  Pred. No. 13;
  Matches   19;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              |||||||||| |||||||||
Db          1 GGTGCATCGACGCAGGGGGG 20


RESULT 15
US-10-194-035-101
; Sequence 101, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
;  APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
;  APPLICANT:  SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
;  APPLICANT:  KLINMAN, Dennis
;  APPLICANT:  ISHII, Ken
;  APPLICANT:  VERTHELYI, Daniela
;  TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
;  FILE REFERENCE: 4239-63317
;  CURRENT APPLICATION NUMBER: US/10/194,035
;  CURRENT FILING DATE:  2002-07-12
;  PRIOR APPLICATION NUMBER: PCT/US01/01122
;  PRIOR FILING DATE: 2001-07-19
;  PRIOR APPLICATION NUMBER: US 60/176,115
;  PRIOR FILING DATE: 2000-01-14
;  NUMBER OF SEQ ID NOS: 119
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 101
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-101

  Query Match             92.0%;  Score 18.4;  DB 13;  Length 20;
  Best Local Similarity   95.0%;  Pred. No. 13;
  Matches   19;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              |||||| ||||||||||||
Db          1 GGTGCACCGATGCAGGGGGG 20
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Search completed: January 20, 2004, 17:24:35
Job time : 133.353 secs

GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: January 20, 2004, 17:31:58 ; Search time 707.059 Seconds
(without alignments)
1157.177 Million cell updates/sec

Title: US-10-068-160-54
Perfect score: 20
Sequence: 1 ggtgcatcgatgcaggggggg 20

Scoring table: OLIGO_NUC
Gapop 60.0 , Gapext 60.0

Searched: 2888711 seqs, 20454813386 residues

Word size : 0

Total number of hits satisfying chosen parameters: 3159832

Minimum DB seq length: 0
Maximum DB seq length: 500

Post-processing: Listing first 45 summaries

Database : GenEmbl:*
1: gb_ba:*
2: gb_htg:*
3: gb_in:*
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32: em_htg_other:*
33: em_htg_mus:*
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35: em_htg_rod:*
36: em_htg_mam:*
37: em_htg_vrt:*
38: em_sy:*
39: em_htgo_hum:*
40: em_htgo_mus:*
41: em_htgo_other:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	20	100.0	20	6	AX194432	AX194432 Sequence
2	20	100.0	20	6	AX194434	AX194434 Sequence
3	20	100.0	20	6	AX194437	AX194437 Sequence
4	20	100.0	20	6	AX194438	AX194438 Sequence
5	20	100.0	20	6	AX194443	AX194443 Sequence
6	20	100.0	20	6	AX194472	AX194472 Sequence
7	20	100.0	20	6	AX352198	AX352198 Sequence
8	20	100.0	20	6	AX352209	AX352209 Sequence
9	20	100.0	20	6	AX352242	AX352242 Sequence
10	20	100.0	20	6	AX465382	AX465382 Sequence
11	20	100.0	20	6	AX465384	AX465384 Sequence
12	20	100.0	20	6	AX465387	AX465387 Sequence
13	20	100.0	20	6	AX465388	AX465388 Sequence
14	20	100.0	20	6	AX465393	AX465393 Sequence
15	20	100.0	20	6	AX465422	AX465422 Sequence
16	20	100.0	22	6	AX352204	AX352204 Sequence
17	20	100.0	22	6	AX352248	AX352248 Sequence
18	20	100.0	28	6	AX352219	AX352219 Sequence
19	20	100.0	28	6	AX352231	AX352231 Sequence
20	20	100.0	29	6	AX352237	AX352237 Sequence
21	20	100.0	30	6	AX352225	AX352225 Sequence
22	20	100.0	30	6	AX352230	AX352230 Sequence
23	20	100.0	32	6	AX352167	AX352167 Sequence
24	19	95.0	19	6	AX194453	AX194453 Sequence
25	19	95.0	19	6	AX194473	AX194473 Sequence
26	19	95.0	19	6	AX465403	AX465403 Sequence
27	19	95.0	19	6	AX465423	AX465423 Sequence
28	18	90.0	18	6	AX352207	AX352207 Sequence
29	18	90.0	18	6	AX352217	AX352217 Sequence
30	18	90.0	18	6	AX352255	AX352255 Sequence
31	18	90.0	20	6	AX352206	AX352206 Sequence
32	18	90.0	20	6	AX352216	AX352216 Sequence
33	18	90.0	20	6	AX352250	AX352250 Sequence
34	18	90.0	20	6	AX352254	AX352254 Sequence
35	18	90.0	26	6	AX352228	AX352228 Sequence
36	18	90.0	26	6	AX352240	AX352240 Sequence
37	18	90.0	28	6	AX352227	AX352227 Sequence
38	18	90.0	28	6	AX352239	AX352239 Sequence
39	17	85.0	17	6	AX194427	AX194427 Sequence
40	17	85.0	17	6	AX352205	AX352205 Sequence
41	17	85.0	17	6	AX352215	AX352215 Sequence
42	17	85.0	17	6	AX352249	AX352249 Sequence
43	17	85.0	17	6	AX352253	AX352253 Sequence
44	17	85.0	17	6	AX465377	AX465377 Sequence
45	17	85.0	25	6	AX352226	AX352226 Sequence

ALIGNMENTS

RESULT 1
AX194432
LOCUS AX194432 20 bp DNA linear PAT 28-AUG-2001
DEFINITION Sequence 32 from Patent WO0151500.
ACCESSION AX194432
VERSION AX194432.1 GI:15385088
KEYWORDS .
SOURCE synthetic construct
ORGANISM synthetic construct
artificial sequences.
REFERENCE 1
AUTHORS Klinman,D., Ishii,K. and Verthelyi,D.
TITLE Oligodeoxynucleotide and its use to induce an immune response
JOURNAL Patent: WO 0151500-A 32 19-JUL-2001;
Secretary of the Department of Health and Human Services (US)

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FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic DNA"
BASE COUNT        3 a      3 c      11 g      3 t
ORIGIN

  Query Match             100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 0.17;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 2
AX194434
LOCUS       AX194434                  20 bp    DNA     linear   PAT 28-AUG-2001
DEFINITION  Sequence 34 from Patent WO0151500.
ACCESSION   AX194434
VERSION     AX194434.1  GI:15385090
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Klinman,D., Ishii,K. and Verthelyi,D.
  TITLE     Oligodeoxynucleotide and its use to induce an immune response
  JOURNAL   Patent: WO 0151500-A 34 19-JUL-2001;
            Secretary of the Department of Health and Human Services (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic DNA"
BASE COUNT        3 a      3 c      11 g      3 t
ORIGIN

  Query Match             100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 0.17;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 3
AX194437
LOCUS       AX194437                  20 bp    DNA     linear   PAT 28-AUG-2001
DEFINITION  Sequence 37 from Patent WO0151500.
ACCESSION   AX194437
VERSION     AX194437.1  GI:15385093
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Klinman,D., Ishii,K. and Verthelyi,D.
  TITLE     Oligodeoxynucleotide and its use to induce an immune response
  JOURNAL   Patent: WO 0151500-A 37 19-JUL-2001;
            Secretary of the Department of Health and Human Services (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic DNA"
BASE COUNT        3 a      3 c      11 g      3 t
ORIGIN

  Query Match             100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 0.17;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 4
AX194438
LOCUS       AX194438                  20 bp    DNA     linear   PAT 28-AUG-2001
DEFINITION  Sequence 38 from Patent WO0151500.
ACCESSION   AX194438
VERSION     AX194438.1  GI:15385094
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Klinman,D., Ishii,K. and Verthelyi,D.
  TITLE     Oligodeoxynucleotide and its use to induce an immune response
  JOURNAL   Patent: WO 0151500-A 38 19-JUL-2001;
            Secretary of the Department of Health and Human Services (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic DNA"
BASE COUNT        3 a      3 c      11 g      3 t
ORIGIN

  Query Match             100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 0.17;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 5
AX194443
LOCUS       AX194443                  20 bp    DNA     linear   PAT 28-AUG-2001
DEFINITION  Sequence 43 from Patent WO0151500.
ACCESSION   AX194443
VERSION     AX194443.1  GI:15385099
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Klinman,D., Ishii,K. and Verthelyi,D.
  TITLE     Oligodeoxynucleotide and its use to induce an immune response
  JOURNAL   Patent: WO 0151500-A 43 19-JUL-2001;
            Secretary of the Department of Health and Human Services (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic DNA"
BASE COUNT        3 a      3 c      11 g      3 t
ORIGIN

  Query Match             100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 0.17;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
```

```
                    ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 6
AX194472
LOCUS       AX194472                  20 bp    DNA     linear   PAT 28-AUG-2001
DEFINITION  Sequence 72 from Patent WO0151500.
ACCESSION   AX194472
VERSION     AX194472.1  GI:15385128
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Klinman,D., Ishii,K. and Verthelyi,D.
  TITLE     Oligodeoxynucleotide and its use to induce an immune response
  JOURNAL   Patent: WO 0151500-A 72 19-JUL-2001;
            Secretary of the Department of Health and Human Services (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic DNA"
BASE COUNT        3 a      3 c     11 g      3 t
ORIGIN

  Query Match             100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 0.17;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 7
AX352198
LOCUS       AX352198                  20 bp    DNA     linear   PAT 06-FEB-2002
DEFINITION  Sequence 494 from Patent WO0193902.
ACCESSION   AX352198
VERSION     AX352198.1  GI:18617481
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Mond,J.J., Flora,M. and Klinman,D.M.
  TITLE     Immunostimulatory rna/dna hybrid molecules
  JOURNAL   Patent: WO 0193902-A 494 13-DEC-2001;
            Biosynexus Incorporated (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic HDR"
BASE COUNT        3 a      3 c     11 g      3 t
ORIGIN

  Query Match             100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 0.17;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 8
AX352209
LOCUS       AX352209                  20 bp    DNA     linear   PAT 06-FEB-2002
DEFINITION  Sequence 505 from Patent WO0193902.
ACCESSION   AX352209
VERSION     AX352209.1  GI:18617492
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Mond,J.J., Flora,M. and Klinman,D.M.
  TITLE     Immunostimulatory rna/dna hybrid molecules
  JOURNAL   Patent: WO 0193902-A 505 13-DEC-2001;
            Biosynexus Incorporated (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic HDR"
BASE COUNT        3 a      3 c     11 g      3 t
ORIGIN

  Query Match             100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 0.17;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 9
AX352242
LOCUS       AX352242                  20 bp    DNA     linear   PAT 06-FEB-2002
DEFINITION  Sequence 538 from Patent WO0193902.
ACCESSION   AX352242
VERSION     AX352242.1  GI:18617525
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Mond,J.J., Flora,M. and Klinman,D.M.
  TITLE     Immunostimulatory rna/dna hybrid molecules
  JOURNAL   Patent: WO 0193902-A 538 13-DEC-2001;
            Biosynexus Incorporated (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic HDR"
BASE COUNT        3 a      3 c     11 g      3 t
ORIGIN

  Query Match             100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 0.17;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 10
AX465382
LOCUS       AX465382                  20 bp    DNA     linear   PAT 16-JUL-2002
DEFINITION  Sequence 50 from Patent WO0211761.
ACCESSION   AX465382
VERSION     AX465382.1  GI:21899745
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
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REFERENCE   1
  AUTHORS   Mond,J.J., Prince,G. and Klinman,D.M.
  TITLE     Vaccine against RSV
  JOURNAL   Patent: WO 0211761-A 50 14-FEB-2002;
            HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY
            MEDICINE (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic oligonucleotide"
BASE COUNT        3 a      3 c     11 g      3 t
ORIGIN

  Query Match             100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 0.17;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 11
AX465384
LOCUS       AX465384                  20 bp    DNA     linear   PAT 16-JUL-2002
DEFINITION  Sequence 52 from Patent WO0211761.
ACCESSION   AX465384
VERSION     AX465384.1  GI:21899747
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Mond,J.J., Prince,G. and Klinman,D.M.
  TITLE     Vaccine against RSV
  JOURNAL   Patent: WO 0211761-A 52 14-FEB-2002;
            HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY
            MEDICINE (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic oligonucleotide"
BASE COUNT        3 a      3 c     11 g      3 t
ORIGIN

  Query Match             100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 0.17;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
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Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 12
AX465387
LOCUS       AX465387                  20 bp    DNA     linear   PAT 16-JUL-2002
DEFINITION  Sequence 55 from Patent WO0211761.
ACCESSION   AX465387
VERSION     AX465387.1  GI:21899750
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Mond,J.J., Prince,G. and Klinman,D.M.
  TITLE     Vaccine against RSV
  JOURNAL   Patent: WO 0211761-A 55 14-FEB-2002;
            HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY
            MEDICINE (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic oligonucleotide"
BASE COUNT        3 a      3 c     11 g      3 t
ORIGIN

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  Best Local Similarity   100.0%;  Pred. No. 0.17;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 13
AX465388
LOCUS       AX465388                  20 bp    DNA     linear   PAT 16-JUL-2002
DEFINITION  Sequence 56 from Patent WO0211761.
ACCESSION   AX465388
VERSION     AX465388.1  GI:21899751
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Mond,J.J., Prince,G. and Klinman,D.M.
  TITLE     Vaccine against RSV
  JOURNAL   Patent: WO 0211761-A 56 14-FEB-2002;
            HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY
            MEDICINE (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic oligonucleotide"
BASE COUNT        3 a      3 c     11 g      3 t
ORIGIN

  Query Match             100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 0.17;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 14
AX465393
LOCUS       AX465393                  20 bp    DNA     linear   PAT 16-JUL-2002
DEFINITION  Sequence 61 from Patent WO0211761.
ACCESSION   AX465393
VERSION     AX465393.1  GI:21899756
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Mond,J.J., Prince,G. and Klinman,D.M.
  TITLE     Vaccine against RSV
  JOURNAL   Patent: WO 0211761-A 61 14-FEB-2002;
            HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY
            MEDICINE (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
```

```
                     /db_xref="taxon:32630"
                     /note="Synthetic oligonucleotide"
BASE COUNT        3 a      3 c     11 g      3 t
ORIGIN

  Query Match            100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity  100.0%;  Pred. No. 0.17;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 15
AX465422
LOCUS       AX465422                 20 bp    DNA     linear   PAT 16-JUL-2002
DEFINITION  Sequence 90 from Patent WO0211761.
ACCESSION   AX465422
VERSION     AX465422.1  GI:21899785
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Mond,J.J., Prince,G. and Klinman,D.M.
  TITLE     Vaccine against RSV
  JOURNAL   Patent: WO 0211761-A 90 14-FEB-2002;
            HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY
            MEDICINE (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic oligonucleotide"
BASE COUNT        3 a      3 c     11 g      3 t
ORIGIN

  Query Match            100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity  100.0%;  Pred. No. 0.17;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


Search completed: January 20, 2004, 20:43:21
Job time : 707.059 secs
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GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: January 20, 2004, 17:15:18 ; Search time 123.235 Seconds
(without alignments)
438.095 Million cell updates/sec

Title: US-10-068-160-54
Perfect score: 20
Sequence: 1 ggtgcatcgatgcaggggg 20

Scoring table: OLIGO_NUC
Gapop 60.0 , Gapext 60.0

Searched: 2552756 seqs, 1349719017 residues

Word size : 0

Total number of hits satisfying chosen parameters: 3959256

Minimum DB seq length: 0
Maximum DB seq length: 500

Post-processing: Listing first 45 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	20	100.0	20	22	AAS09582	Immunoreactive CpG
2	20	100.0	20	22	AAS09584	Immunoreactive CpG
3	20	100.0	20	22	AAS09587	Immunoreactive CpG
4	20	100.0	20	22	AAS09588	Immunoreactive CpG
5	20	100.0	20	22	AAS09593	Immunoreactive CpG
6	20	100.0	20	22	AAS09622	Immunoreactive CpG
7	20	100.0	20	22	AAC80612	Immunogenic CpG ol
8	20	100.0	20	22	AAC80614	Immunogenic CpG ol
9	20	100.0	20	22	AAC80617	Immunogenic CpG ol
10	20	100.0	20	22	AAC80618	Immunogenic CpG ol
11	20	100.0	20	22	AAC80623	Immunogenic CpG ol
12	20	100.0	20	22	AAC80652	Immunogenic CpG ol
13	20	100.0	20	24	ABK46460	Immunostimulatory
14	20	100.0	20	24	ABK46462	Immunostimulatory
15	20	100.0	20	24	ABK46465	Immunostimulatory
16	20	100.0	20	24	ABK46466	Immunostimulatory
17	20	100.0	20	24	ABK46471	Immunostimulatory
18	20	100.0	20	24	ABK46500	Immunostimulatory
19	20	100.0	20	24	ABL35568	Immunostimulatory
20	20	100.0	20	24	ABL35579	Immunostimulatory
21	20	100.0	20	24	ABL35612	Immunostimulatory
22	20	100.0	22	24	ABL35574	Immunostimulatory
23	20	100.0	22	24	ABL35618	Immunostimulatory
24	20	100.0	28	24	ABL35589	Immunostimulatory
25	20	100.0	28	24	ABL35601	Immunostimulatory
26	20	100.0	29	24	ABL35607	Immunostimulatory
27	20	100.0	30	24	ABL35595	Immunostimulatory
28	20	100.0	30	24	ABL35600	Immunostimulatory
29	20	100.0	32	24	ABL35537	Immunostimulatory
30	19	95.0	19	22	AAS09603	Immunoreactive CpG
31	19	95.0	19	22	AAS09623	Immunoreactive CpG
32	19	95.0	19	22	AAC80633	Immunogenic CpG ol
33	19	95.0	19	22	AAC80653	Immunogenic CpG ol
34	19	95.0	19	24	ABK46481	Immunostimulatory
35	19	95.0	19	24	ABK46501	Immunostimulatory
36	18	90.0	18	24	ABL35577	Immunostimulatory
37	18	90.0	18	24	ABL35587	Immunostimulatory
38	18	90.0	18	24	ABL35625	Immunostimulatory
39	18	90.0	20	24	ABL35576	Immunostimulatory
40	18	90.0	20	24	ABL35586	Immunostimulatory
41	18	90.0	20	24	ABL35620	Immunostimulatory
42	18	90.0	20	24	ABL35624	Immunostimulatory
43	18	90.0	26	24	ABL35598	Immunostimulatory
44	18	90.0	26	24	ABL35610	Immunostimulatory
45	18	90.0	28	24	ABL35597	Immunostimulatory

ALIGNMENTS

RESULT 1
AAS09582
ID AAS09582 standard; DNA; 20 BP.
XX
AC AAS09582;
XX
DT 26-SEP-2001 (first entry)
XX
DE Immunoreactive CpG sequence-containing oligonucleotide #32.
XX
KW CpG sequence; immune response; non-B cell activation; interferon gamma;
KW IFN-gamma; humoral; antibody production; interleukin-6 production;
KW therapeutic; allergy; asthma; cancer; autoimmune disorder; infection;
KW bio-warfare; vaccine; antisense therapy; eczema; allergic rhinitis;
KW coryza; hay fever; urticaria; hives; food allergy; atopic condition;
KW hepatitis; human immunodeficiency virus; HIV; malaria; Francisella;
KW lupus erythematosus; rheumatoid arthritis; multiple sclerosis;
KW schistosomiasis; tuberculosis; acquired immunodeficiency syndrome; AIDS;
KW Leishmania; Ebola; Anthrax; Listeria; ss.
XX
OS Synthetic.
XX
PN WO200151500-A1.
XX
PD 19-JUL-2001.
XX
PF 12-JAN-2001; 2001WO-US01122.
XX
PR 14-JAN-2000; 2000US-0176115.
XX
PA (USSH) US DEPT HEALTH & HUMAN SERVICES.

XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-442129/47.
XX
PT Oligodeoxynucleotides for inducing an immune response to treat and
PT prevent an allergic reaction, cancer, an autoimmune disorder and
PT symptoms resulting from exposure to bio-warfare agents, comprise
PT multiple CpG sequences -
XX
PS Claim 5; Page 32; 48pp; English.
XX
CC AAS09551-AAS09662 represent oligodeoxynucleotides (ODN) of at least 10
CC nucleotides comprising multiple CpG sequences, where one of the CpG
CC sequences is different from another of the multiple CpG sequences.
CC The ODN are useful for inducing an immune response, preferably a cell-
CC mediated immune response, involving non-B cell activation, interferon
CC gamma (IFN-gamma) production or a humoral immune response involving B
CC cell activation, antibody and interleukin-6 production in a host, for
CC treating, preventing or ameliorating an allergic reaction, e.g. asthma,
CC cancer, e.g. solid tumour cancer, a disease associated with the immune
CC system e.g. autoimmune disorder or an immune system deficiency, infection
CC or a symptom resulting from exposure to bio-warfare agent in a human. The
CC induction of immune response improves the efficacy of a vaccine and is
CC used in antisense therapy. The ODN are useful for treating, preventing or
CC ameliorating allergic reactions, including eczema, allergic rhinitis or
CC coryza, hay fever, bronchial asthma, urticaria (hives), food allergies
CC and other atopic conditions, for improving the efficacy of vaccines
CC against hepatitis A, B and C, human immunodeficiency virus (HIV) and
CC malaria, for treating immune system deficiencies, e.g. lupus
CC erythematosus and autoimmune diseases such as rheumatoid arthritis and
CC multiple sclerosis, infections including Francisella, schistosomiasis,
CC tuberculosis, acquired immunodeficiency syndrome (AIDS), Leishmania and
CC symptoms resulting from exposure of bio-warfare agent, including Ebola,
CC Anthrax and Listeria.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

Query Match 100.0%; Score 20; DB 22; Length 20;
Best Local Similarity 100.0%; Pred. No. 0.075;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 2
AAS09584
ID AAS09584 standard; DNA; 20 BP.
XX
AC AAS09584;
XX
DT 26-SEP-2001 (first entry)
XX
DE Immunoreactive CpG sequence-containing oligonucleotide #34.
XX
KW CpG sequence; immune response; non-B cell activation; interferon gamma;
KW IFN-gamma; humoral; antibody production; interleukin-6 production;
KW therapeutic; allergy; asthma; cancer; autoimmune disorder; infection;
KW bio-warfare; vaccine; antisense therapy; eczema; allergic rhinitis;
KW coryza; hay fever; urticaria; hives; food allergy; atopic condition;
KW hepatitis; human immunodeficiency virus; HIV; malaria; Francisella;
KW lupus erythematosus; rheumatoid arthritis; multiple sclerosis;
KW schistosomiasis; tuberculosis; acquired immunodeficiency syndrome; AIDS;
KW Leishmania; Ebola; Anthrax; Listeria; ss.
XX
OS Synthetic.
XX
PN WO200151500-A1.
XX
PD 19-JUL-2001.
XX
PF 12-JAN-2001; 2001WO-US01122.
XX
PR 14-JAN-2000; 2000US-0176115.
XX
PA (USSH) US DEPT HEALTH & HUMAN SERVICES.
XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-442129/47.
XX
PT Oligodeoxynucleotides for inducing an immune response to treat and
PT prevent an allergic reaction, cancer, an autoimmune disorder and
PT symptoms resulting from exposure to bio-warfare agents, comprise
PT multiple CpG sequences -
XX
PS Claim 5; Page 32; 48pp; English.
XX
CC AAS09551-AAS09662 represent oligodeoxynucleotides (ODN) of at least 10
CC nucleotides comprising multiple CpG sequences, where one of the CpG
CC sequences is different from another of the multiple CpG sequences.
CC The ODN are useful for inducing an immune response, preferably a cell-
CC mediated immune response, involving non-B cell activation, interferon
CC gamma (IFN-gamma) production or a humoral immune response involving B
CC cell activation, antibody and interleukin-6 production in a host, for
CC treating, preventing or ameliorating an allergic reaction, e.g. asthma,
CC cancer, e.g. solid tumour cancer, a disease associated with the immune
CC system e.g. autoimmune disorder or an immune system deficiency, infection
CC or a symptom resulting from exposure to bio-warfare agent in a human. The
CC induction of immune response improves the efficacy of a vaccine and is
CC used in antisense therapy. The ODN are useful for treating, preventing or
CC ameliorating allergic reactions, including eczema, allergic rhinitis or
CC coryza, hay fever, bronchial asthma, urticaria (hives), food allergies
CC and other atopic conditions, for improving the efficacy of vaccines
CC against hepatitis A, B and C, human immunodeficiency virus (HIV) and
CC malaria, for treating immune system deficiencies, e.g. lupus
CC erythematosus and autoimmune diseases such as rheumatoid arthritis and
CC multiple sclerosis, infections including Francisella, schistosomiasis,
CC tuberculosis, acquired immunodeficiency syndrome (AIDS), Leishmania and
CC symptoms resulting from exposure of bio-warfare agent, including Ebola,
CC Anthrax and Listeria.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

Query Match 100.0%; Score 20; DB 22; Length 20;
Best Local Similarity 100.0%; Pred. No. 0.075;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 3
AAS09587
ID AAS09587 standard; DNA; 20 BP.
XX
AC AAS09587;
XX
DT 26-SEP-2001 (first entry)
XX
DE Immunoreactive CpG sequence-containing oligonucleotide #37.
XX
KW CpG sequence; immune response; non-B cell activation; interferon gamma;
KW IFN-gamma; humoral; antibody production; interleukin-6 production;
KW therapeutic; allergy; asthma; cancer; autoimmune disorder; infection;
KW bio-warfare; vaccine; antisense therapy; eczema; allergic rhinitis;
KW coryza; hay fever; urticaria; hives; food allergy; atopic condition;
KW hepatitis; human immunodeficiency virus; HIV; malaria; Francisella;
KW lupus erythematosus; rheumatoid arthritis; multiple sclerosis;
KW schistosomiasis; tuberculosis; acquired immunodeficiency syndrome; AIDS;
KW Leishmania; Ebola; Anthrax; Listeria; ss.
XX
OS Synthetic.

```
XX
PN   WO200151500-A1.
XX
PD   19-JUL-2001.
XX
PF   12-JAN-2001; 2001WO-US01122.
XX
PR   14-JAN-2000; 2000US-0176115.
XX
PA   (USSH ) US DEPT HEALTH & HUMAN SERVICES.
XX
PI   Klinman D,  Ishii K,  Verthelyi D;
XX
DR   WPI; 2001-442129/47.
XX
PT   Oligodeoxynucleotides for inducing an immune response to treat and
PT   prevent an allergic reaction, cancer, an autoimmune disorder and
PT   symptoms resulting from exposure to bio-warfare agents, comprise
PT   multiple CpG sequences  -
XX
PS   Claim 5; Page 33; 48pp; English.
XX
CC   AAS09551-AAS09662 represent oligodeoxynucleotides (ODN) of at least 10
CC   nucleotides comprising multiple CpG sequences, where one of the CpG
CC   sequences is different from another of the multiple CpG sequences.
CC   The ODN are useful for inducing an immune response, preferably a cell-
CC   mediated immune response, involving non-B cell activation, interferon
CC   gamma (IFN-gamma) production or a humoral immune response involving B
CC   cell activation, antibody and interleukin-6 production in a host, for
CC   treating, preventing or ameliorating an allergic reaction, e.g. asthma,
CC   cancer, e.g. solid tumour cancer, a disease associated with the immune
CC   system e.g. autoimmune disorder or an immune system deficiency, infection
CC   or a symptom resulting from exposure to bio-warfare agent in a human. The
CC   induction of immune response improves the efficacy of a vaccine and is
CC   used in antisense therapy. The ODN are useful for treating, preventing or
CC   ameliorating allergic reactions, including eczema, allergic rhinitis or
CC   coryza, hay fever, bronchial asthma, urticaria (hives), food allergies
CC   and other atopic conditions, for improving the efficacy of vaccines
CC   against hepatitis A, B and C, human immunodeficiency virus (HIV) and
CC   malaria, for treating immune system deficiencies, e.g. lupus
CC   erythematosus and autoimmune diseases such as rheumatoid arthritis and
CC   multiple sclerosis, infections including Francisella, schistosomiasis,
CC   tuberculosis, acquired immunodeficiency syndrome (AIDS), Leishmania and
CC   symptoms resulting from exposure of bio-warfare agent, including Ebola,
CC   Anthrax and Listeria.
XX
SQ   Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

  Query Match             100.0%;  Score 20;  DB 22;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 0.075;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 4
AAS09588
ID   AAS09588 standard; DNA; 20 BP.
XX
AC   AAS09588;
XX
DT   26-SEP-2001  (first entry)
XX
DE   Immunoreactive CpG sequence-containing oligonucleotide #38.
XX
KW   CpG sequence; immune response; non-B cell activation; interferon gamma;
KW   IFN-gamma; humoral; antibody production; interleukin-6 production;
KW   therapeutic; allergy; asthma; cancer; autoimmune disorder; infection;
KW   bio-warfare; vaccine; antisense therapy; eczema; allergic rhinitis;
KW   coryza; hay fever; urticaria; hives; food allergy; atopic condition;
KW   hepatitis; human immunodeficiency virus; HIV; malaria; Francisella;
KW   lupus erythematosus; rheumatoid arthritis; multiple sclerosis;
KW   schistosomiasis; tuberculosis; acquired immunodeficiency syndrome; AIDS;
KW   Leishmania; Ebola; Anthrax; Listeria; ss.
XX
OS   Synthetic.
XX
PN   WO200151500-A1.
XX
PD   19-JUL-2001.
XX
PF   12-JAN-2001; 2001WO-US01122.
XX
PR   14-JAN-2000; 2000US-0176115.
XX
PA   (USSH ) US DEPT HEALTH & HUMAN SERVICES.
XX
PI   Klinman D,  Ishii K,  Verthelyi D;
XX
DR   WPI; 2001-442129/47.
XX
PT   Oligodeoxynucleotides for inducing an immune response to treat and
PT   prevent an allergic reaction, cancer, an autoimmune disorder and
PT   symptoms resulting from exposure to bio-warfare agents, comprise
PT   multiple CpG sequences  -
XX
PS   Claim 5; Page 33; 48pp; English.
XX
CC   AAS09551-AAS09662 represent oligodeoxynucleotides (ODN) of at least 10
CC   nucleotides comprising multiple CpG sequences, where one of the CpG
CC   sequences is different from another of the multiple CpG sequences.
CC   The ODN are useful for inducing an immune response, preferably a cell-
CC   mediated immune response, involving non-B cell activation, interferon
CC   gamma (IFN-gamma) production or a humoral immune response involving B
CC   cell activation, antibody and interleukin-6 production in a host, for
CC   treating, preventing or ameliorating an allergic reaction, e.g. asthma,
CC   cancer, e.g. solid tumour cancer, a disease associated with the immune
CC   system e.g. autoimmune disorder or an immune system deficiency, infection
CC   or a symptom resulting from exposure to bio-warfare agent in a human. The
CC   induction of immune response improves the efficacy of a vaccine and is
CC   used in antisense therapy. The ODN are useful for treating, preventing or
CC   ameliorating allergic reactions, including eczema, allergic rhinitis or
CC   coryza, hay fever, bronchial asthma, urticaria (hives), food allergies
CC   and other atopic conditions, for improving the efficacy of vaccines
CC   against hepatitis A, B and C, human immunodeficiency virus (HIV) and
CC   malaria, for treating immune system deficiencies, e.g. lupus
CC   erythematosus and autoimmune diseases such as rheumatoid arthritis and
CC   multiple sclerosis, infections including Francisella, schistosomiasis,
CC   tuberculosis, acquired immunodeficiency syndrome (AIDS), Leishmania and
CC   symptoms resulting from exposure of bio-warfare agent, including Ebola,
CC   Anthrax and Listeria.
XX
SQ   Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

  Query Match             100.0%;  Score 20;  DB 22;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 0.075;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 5
AAS09593
ID   AAS09593 standard; DNA; 20 BP.
XX
AC   AAS09593;
XX
DT   26-SEP-2001  (first entry)
XX
DE   Immunoreactive CpG sequence-containing oligonucleotide #43.
XX
KW   CpG sequence; immune response; non-B cell activation; interferon gamma;
```

KW IFN-gamma; humoral; antibody production; interleukin-6 production;
KW therapeutic; allergy; asthma; cancer; autoimmune disorder; infection;
KW bio-warfare; vaccine; antisense therapy; eczema; allergic rhinitis;
KW coryza; hay fever; urticaria; hives; food allergy; atopic condition;
KW hepatitis; human immunodeficiency virus; HIV; malaria; Francisella;
KW lupus erythematosus; rheumatoid arthritis; multiple sclerosis;
KW schistosomiasis; tuberculosis; acquired immunodeficiency syndrome; AIDS;
KW Leishmania; Ebola; Anthrax; Listeria; ss.
XX
OS Synthetic.
XX
PN WO200151500-A1.
XX
PD 19-JUL-2001.
XX
PF 12-JAN-2001; 2001WO-US01122.
XX
PR 14-JAN-2000; 2000US-0176115.
XX
PA (USSH) US DEPT HEALTH & HUMAN SERVICES.
XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-442129/47.
XX
PT Oligodeoxynucleotides for inducing an immune response to treat and
PT prevent an allergic reaction, cancer, an autoimmune disorder and
PT symptoms resulting from exposure to bio-warfare agents, comprise
PT multiple CpG sequences -
XX
PS Claim 5; Page 34; 48pp; English.
XX
CC AAS09551-AAS09662 represent oligodeoxynucleotides (ODN) of at least 10
CC nucleotides comprising multiple CpG sequences, where one of the CpG
CC sequences is different from another of the multiple CpG sequences.
CC The ODN are useful for inducing an immune response, preferably a cell-
CC mediated immune response, involving non-B cell activation, interferon
CC gamma (IFN-gamma) production or a humoral immune response involving B
CC cell activation, antibody and interleukin-6 production in a host, for
CC treating, preventing or ameliorating an allergic reaction, e.g. asthma,
CC cancer, e.g. solid tumour cancer, a disease associated with the immune
CC system e.g. autoimmune disorder or an immune system deficiency, infection
CC or a symptom resulting from exposure to bio-warfare agent in a human. The
CC induction of immune response improves the efficacy of a vaccine and is
CC used in antisense therapy. The ODN are useful for treating, preventing or
CC ameliorating allergic reactions, including eczema, allergic rhinitis or
CC coryza, hay fever, bronchial asthma, urticaria (hives), food allergies
CC and other atopic conditions, for improving the efficacy of vaccines
CC against hepatitis A, B and C, human immunodeficiency virus (HIV) and
CC malaria, for treating immune system deficiencies, e.g. lupus
CC erythematosus and autoimmune diseases such as rheumatoid arthritis and
CC multiple sclerosis, infections including Francisella, schistosomiasis,
CC tuberculosis, acquired immunodeficiency syndrome (AIDS), Leishmania and
CC symptoms resulting from exposure of bio-warfare agent, including Ebola,
CC Anthrax and Listeria.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

Query Match 100.0%; Score 20; DB 22; Length 20;
Best Local Similarity 100.0%; Pred. No. 0.075;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 6
AAS09622
ID AAS09622 standard; DNA; 20 BP.
XX
AC AAS09622;
XX
DT 26-SEP-2001 (first entry)
XX
DE Immunoreactive CpG sequence-containing oligonucleotide #72.
XX
KW CpG sequence; immune response; non-B cell activation; interferon gamma;
KW IFN-gamma; humoral; antibody production; interleukin-6 production;
KW therapeutic; allergy; asthma; cancer; autoimmune disorder; infection;
KW bio-warfare; vaccine; antisense therapy; eczema; allergic rhinitis;
KW coryza; hay fever; urticaria; hives; food allergy; atopic condition;
KW hepatitis; human immunodeficiency virus; HIV; malaria; Francisella;
KW lupus erythematosus; rheumatoid arthritis; multiple sclerosis;
KW schistosomiasis; tuberculosis; acquired immunodeficiency syndrome; AIDS;
KW Leishmania; Ebola; Anthrax; Listeria; ss.
XX
OS Synthetic.
XX
PN WO200151500-A1.
XX
PD 19-JUL-2001.
XX
PF 12-JAN-2001; 2001WO-US01122.
XX
PR 14-JAN-2000; 2000US-0176115.
XX
PA (USSH) US DEPT HEALTH & HUMAN SERVICES.
XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-442129/47.
XX
PT Oligodeoxynucleotides for inducing an immune response to treat and
PT prevent an allergic reaction, cancer, an autoimmune disorder and
PT symptoms resulting from exposure to bio-warfare agents, comprise
PT multiple CpG sequences -
XX
PS Claim 5; Page 39; 48pp; English.
XX
CC AAS09551-AAS09662 represent oligodeoxynucleotides (ODN) of at least 10
CC nucleotides comprising multiple CpG sequences, where one of the CpG
CC sequences is different from another of the multiple CpG sequences.
CC The ODN are useful for inducing an immune response, preferably a cell-
CC mediated immune response, involving non-B cell activation, interferon
CC gamma (IFN-gamma) production or a humoral immune response involving B
CC cell activation, antibody and interleukin-6 production in a host, for
CC treating, preventing or ameliorating an allergic reaction, e.g. asthma,
CC cancer, e.g. solid tumour cancer, a disease associated with the immune
CC system e.g. autoimmune disorder or an immune system deficiency, infection
CC or a symptom resulting from exposure to bio-warfare agent in a human. The
CC induction of immune response improves the efficacy of a vaccine and is
CC used in antisense therapy. The ODN are useful for treating, preventing or
CC ameliorating allergic reactions, including eczema, allergic rhinitis or
CC coryza, hay fever, bronchial asthma, urticaria (hives), food allergies
CC and other atopic conditions, for improving the efficacy of vaccines
CC against hepatitis A, B and C, human immunodeficiency virus (HIV) and
CC malaria, for treating immune system deficiencies, e.g. lupus
CC erythematosus and autoimmune diseases such as rheumatoid arthritis and
CC multiple sclerosis, infections including Francisella, schistosomiasis,
CC tuberculosis, acquired immunodeficiency syndrome (AIDS), Leishmania and
CC symptoms resulting from exposure of bio-warfare agent, including Ebola,
CC Anthrax and Listeria.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

Query Match 100.0%; Score 20; DB 22; Length 20;
Best Local Similarity 100.0%; Pred. No. 0.075;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 7

AAC80612
ID AAC80612 standard; DNA; 20 BP.
XX
AC AAC80612;
XX
DT 14-FEB-2001 (first entry)
XX
DE Immunogenic CpG oligodeoxynucleotide, SEQ ID NO:32.
XX
KW CpG oligodeoxynucleotide; unmethylated; antigen-presenting cell;
KW immunogenic; cytokine release; natural killer cell; NK cell activation;
KW cell-mediated immune response; T-cell response; humoral response;
KW B-cell response; antibody production; immune response induction;
KW vaccine; allergy; asthma; infection; bacterial; viral; fungal; protozoal;
KW parasitic; tuberculosis; AIDS; autoimmune disease; lupus erythematosus;
KW rheumatoid arthritis; multiple sclerosis; solid tumour; cancer;
KW immune deficiency; biological warfare agent; cytostatic; antiarthritic;
KW antimicrobial; antiallergic; protozoacide; tuberculostatic;
KW antiasthmatic; dermatological; phosphorothioate; ss.
XX
OS Synthetic.
XX
PN WO200061151-A2.
XX
PD 19-OCT-2000.
XX
PF 12-APR-2000; 2000WO-US09839.
XX
PR 12-APR-1999; 99US-0128898.
XX
PA (KLIN/) KLINMAN D.
PA (ISHI/) ISHII K.
PA (VERT/) VERTHELYI D.
XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-006880/01.
XX
PT Novel oligonucleotides useful for the prevention and treatment of
PT allergies, cancer, and autoimmune disorders and for ameliorating
PT symptoms resulting from exposure to a bio-warfare agent -
XX
PS Claim 4; Page 29; 46pp; English.
XX
CC The invention relates to novel immunogenic CpG oligodeoxynucleotides
CC (AAC80581-C80723). The oligonucleotide are at least 10 bases long
CC and comprise one of the generic sequences 5'-NNNT-CpG-WNNN-3' or
CC 5'-RY-CpG-RY-3'. The central CpG motif is unmethylated, and the
CC oligonucleotides optionally have phosphorothioate linkages which make
CC them more resistant to degradation. The invention also relates to an
CC oligonucleotide delivery complex comprising an oligonucleotide of the
CC invention and a targetting agent, and a pharmaceutical composition
CC comprising the oligonucleotide delivery complex. The oligonucleotides
CC are able to induce either a cell-mediated (T-cell) response or a humoral
CC (B-cell, antibody) response, with oligonucleotides of the sequence
CC 5'-RY-CpG-RY-3' being able to induce a cell-mediated response, and those
CC of the sequence 5'-NNNT-CpG-WNNN-3' being able to induce a humoral
CC response. It is thought that after administration, the oligonucleotide
CC acts on antigen-presenting cells (e.g., macrophages and dendritic
CC cells), which then release cytokines, leading to activation of natural
CC killer (NK) cells. A cell-mediated or humoral response can then occur by
CC activation of T- or B-cells. The induction of an immune response is
CC useful for treating, preventing or ameliorating an allergic reaction
CC (preferably asthma), or an infection, where an immunogenic CpG
CC oligonucleotide is administered either alone or in combination with an
CC anti-allergenic agent or anti-infectious agent. The allergic conditions
CC which may be treated include eczema, allergic rhinitis, hayfever,
CC urticaria, food allergies and other atopic conditions, and the
CC infections which may be treated include viral, bacterial, fungal and
CC protozoal infections such as tuberculosis, AIDS, leishmania and
CC schistosomiasis. Immune response induction may also be used in the
CC treatment of an autoimmune disorder (e.g., lupus erythematosus,
CC rheumatoid arthritis and multiple sclerosis), a disease associated with
CC immune system deficiency, and symptoms resulting from exposure to an
CC agent of biological warfare. An immunogenic CpG oligonucleotide, either
CC alone or in combination with an anti-cancer agent, is useful for treating
CC solid tumour cancer. The induction of an immune response is used in
CC antisense therapy and to improve the efficacy of a vaccine. The
CC oligonucleotide is preferably administered to lymphocytes ex vivo,
CC producing activated lymphocytes which are then administered to the host.
CC The present sequence represents an immunogenic CpG oligodeoxynucleotide
CC of the invention.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

Query Match 100.0%; Score 20; DB 22; Length 20;
Best Local Similarity 100.0%; Pred. No. 0.075;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 8
AAC80614
ID AAC80614 standard; DNA; 20 BP.
XX
AC AAC80614;
XX
DT 14-FEB-2001 (first entry)
XX
DE Immunogenic CpG oligodeoxynucleotide, SEQ ID NO:34.
XX
KW CpG oligodeoxynucleotide; unmethylated; antigen-presenting cell;
KW immunogenic; cytokine release; natural killer cell; NK cell activation;
KW cell-mediated immune response; T-cell response; humoral response;
KW B-cell response; antibody production; immune response induction;
KW vaccine; allergy; asthma; infection; bacterial; viral; fungal; protozoal;
KW parasitic; tuberculosis; AIDS; autoimmune disease; lupus erythematosus;
KW rheumatoid arthritis; multiple sclerosis; solid tumour; cancer;
KW immune deficiency; biological warfare agent; cytostatic; antiarthritic;
KW antimicrobial; antiallergic; protozoacide; tuberculostatic;
KW antiasthmatic; dermatological; phosphorothioate; ss.
XX
OS Synthetic.
XX
PN WO200061151-A2.
XX
PD 19-OCT-2000.
XX
PF 12-APR-2000; 2000WO-US09839.
XX
PR 12-APR-1999; 99US-0128898.
XX
PA (KLIN/) KLINMAN D.
PA (ISHI/) ISHII K.
PA (VERT/) VERTHELYI D.
XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-006880/01.
XX
PT Novel oligonucleotides useful for the prevention and treatment of
PT allergies, cancer, and autoimmune disorders and for ameliorating
PT symptoms resulting from exposure to a bio-warfare agent -
XX
PS Claim 4; Page 29; 46pp; English.
XX
CC The invention relates to novel immunogenic CpG oligodeoxynucleotides
CC (AAC80581-C80723). The oligonucleotide are at least 10 bases long
CC and comprise one of the generic sequences 5'-NNNT-CpG-WNNN-3' or
CC 5'-RY-CpG-RY-3'. The central CpG motif is unmethylated, and the
CC oligonucleotides optionally have phosphorothioate linkages which make
CC them more resistant to degradation. The invention also relates to an
CC oligonucleotide delivery complex comprising an oligonucleotide of the

CC invention and a targetting agent, and a pharmaceutical composition
CC comprising the oligonucleotide delivery complex. The oligonucleotides
CC are able to induce either a cell-mediated (T-cell) response or a humoral
CC (B-cell, antibody) response, with oligonucleotides of the sequence
CC 5'-RY-CpG-RY-3' being able to induce a cell-mediated response, and those
CC of the sequence 5'-NNNT-CpG-WNNN-3' being able to induce a humoral
CC response. It is thought that after administration, the oligonucleotide
CC acts on antigen-presenting cells (e.g., macrophages and dendritic
CC cells), which then release cytokines, leading to activation of natural
CC killer (NK) cells. A cell-mediated or humoral response can then occur by
CC activation of T- or B-cells. The induction of an immune response is
CC useful for treating, preventing or ameliorating an allergic reaction
CC (preferably asthma), or an infection, where an immunogenic CpG
CC oligonucleotide is administered either alone or in combination with an
CC anti-allergenic agent or anti-infectious agent. The allergic conditions
CC which may be treated include eczema, allergic rhinitis, hayfever,
CC urticaria, food allergies and other atopic conditions, and the
CC infections which may be treated include viral, bacterial, fungal and
CC protozoal infections such as tuberculosis, AIDS, leishmania and
CC schistosomiasis. Immune response induction may also be used in the
CC treatment of an autoimmune disorder (e.g., lupus erythematosus,
CC rheumatoid arthritis and multiple sclerosis), a disease associated with
CC immune system deficiency, and symptoms resulting from exposure to an
CC agent of biological warfare. An immunogenic CpG oligonucleotide, either
CC alone or in combination with an anti-cancer agent, is useful for treating
CC solid tumour cancer. The induction of an immune response is used in
CC antisense therapy and to improve the efficacy of a vaccine. The
CC oligonucleotide is preferably administered to lymphocytes ex vivo,
CC producing activated lymphocytes which are then administered to the host.
CC The present sequence represents an immunogenic CpG oligodeoxynucleotide
CC of the invention.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

Query Match 100.0%; Score 20; DB 22; Length 20;
Best Local Similarity 100.0%; Pred. No. 0.075;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 9
AAC80617
ID AAC80617 standard; DNA; 20 BP.
XX
AC AAC80617;
XX
DT 14-FEB-2001 (first entry)
XX
DE Immunogenic CpG oligodeoxynucleotide, SEQ ID NO:37.
XX
KW CpG oligodeoxynucleotide; unmethylated; antigen-presenting cell;
KW immunogenic; cytokine release; natural killer cell; NK cell activation;
KW cell-mediated immune response; T-cell response; humoral response;
KW B-cell response; antibody production; immune response induction;
KW vaccine; allergy; asthma; infection; bacterial; viral; fungal; protozoal;
KW parasitic; tuberculosis; AIDS; autoimmune disease; lupus erythematosus;
KW rheumatoid arthritis; multiple sclerosis; solid tumour; cancer;
KW immune deficiency; biological warfare agent; cytostatic; antiarthritic;
KW antimicrobial; antiallergic; protozoacide; tuberculostatic;
KW antiasthmatic; dermatological; phosphorothioate; ss.
XX
OS Synthetic.
XX
PN WO200061151-A2.
XX
PD 19-OCT-2000.
XX
PF 12-APR-2000; 2000WO-US09839.
XX
PR 12-APR-1999; 99US-0128898.
XX
PA (KLIN/) KLINMAN D.
PA (ISHI/) ISHII K.
PA (VERT/) VERTHELYI D.
XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-006880/01.
XX
PT Novel oligonucleotides useful for the prevention and treatment of
PT allergies, cancer, and autoimmune disorders and for ameliorating
PT symptoms resulting from exposure to a bio-warfare agent -
XX
PS Claim 4; Page 29; 46pp; English.
XX
CC The invention relates to novel immunogenic CpG oligodeoxynucleotides
CC (AAC80581-C80723). The oligonucleotide are at least 10 bases long
CC and comprise one of the generic sequences 5'-NNNT-CpG-WNNN-3' or
CC 5'-RY-CpG-RY-3'. The central CpG motif is unmethylated, and the
CC oligonucleotides optionally have phosphorothioate linkages which make
CC them more resistant to degradation. The invention also relates to an
CC oligonucleotide delivery complex comprising an oligonucleotide of the
CC invention and a targetting agent, and a pharmaceutical composition
CC comprising the oligonucleotide delivery complex. The oligonucleotides
CC are able to induce either a cell-mediated (T-cell) response or a humoral
CC (B-cell, antibody) response, with oligonucleotides of the sequence
CC 5'-RY-CpG-RY-3' being able to induce a cell-mediated response, and those
CC of the sequence 5'-NNNT-CpG-WNNN-3' being able to induce a humoral
CC response. It is thought that after administration, the oligonucleotide
CC acts on antigen-presenting cells (e.g., macrophages and dendritic
CC cells), which then release cytokines, leading to activation of natural
CC killer (NK) cells. A cell-mediated or humoral response can then occur by
CC activation of T- or B-cells. The induction of an immune response is
CC useful for treating, preventing or ameliorating an allergic reaction
CC (preferably asthma), or an infection, where an immunogenic CpG
CC oligonucleotide is administered either alone or in combination with an
CC anti-allergenic agent or anti-infectious agent. The allergic conditions
CC which may be treated include eczema, allergic rhinitis, hayfever,
CC urticaria, food allergies and other atopic conditions, and the
CC infections which may be treated include viral, bacterial, fungal and
CC protozoal infections such as tuberculosis, AIDS, leishmania and
CC schistosomiasis. Immune response induction may also be used in the
CC treatment of an autoimmune disorder (e.g., lupus erythematosus,
CC rheumatoid arthritis and multiple sclerosis), a disease associated with
CC immune system deficiency, and symptoms resulting from exposure to an
CC agent of biological warfare. An immunogenic CpG oligonucleotide, either
CC alone or in combination with an anti-cancer agent, is useful for treating
CC solid tumour cancer. The induction of an immune response is used in
CC antisense therapy and to improve the efficacy of a vaccine. The
CC oligonucleotide is preferably administered to lymphocytes ex vivo,
CC producing activated lymphocytes which are then administered to the host.
CC The present sequence represents an immunogenic CpG oligodeoxynucleotide
CC of the invention.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

Query Match 100.0%; Score 20; DB 22; Length 20;
Best Local Similarity 100.0%; Pred. No. 0.075;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 10
AAC80618
ID AAC80618 standard; DNA; 20 BP.
XX
AC AAC80618;
XX
DT 14-FEB-2001 (first entry)
XX

DE Immunogenic CpG oligodeoxynucleotide, SEQ ID NO:38.
XX
KW CpG oligodeoxynucleotide; unmethylated; antigen-presenting cell;
KW immunogenic; cytokine release; natural killer cell; NK cell activation;
KW cell-mediated immune response; T-cell response; humoral response;
KW B-cell response; antibody production; immune response induction;
KW vaccine; allergy; asthma; infection; bacterial; viral; fungal; protozoal;
KW parasitic; tuberculosis; AIDS; autoimmune disease; lupus erythematosus;
KW rheumatoid arthritis; multiple sclerosis; solid tumour; cancer;
KW immune deficiency; biological warfare agent; cytostatic; antiarthritic;
KW antimicrobial; antiallergic; protozoacide; tuberculostatic;
KW antiasthmatic; dermatological; phosphorothioate; ss.
XX
OS Synthetic.
XX
PN WO200061151-A2.
XX
PD 19-OCT-2000.
XX
PF 12-APR-2000; 2000WO-US09839.
XX
PR 12-APR-1999; 99US-0128898.
XX
PA (KLIN/) KLINMAN D.
PA (ISHI/) ISHII K.
PA (VERT/) VERTHELYI D.
XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-006880/01.
XX
PT Novel oligonucleotides useful for the prevention and treatment of
PT allergies, cancer, and autoimmune disorders and for ameliorating
PT symptoms resulting from exposure to a bio-warfare agent -
XX
PS Claim 4; Page 30; 46pp; English.
XX
CC The invention relates to novel immunogenic CpG oligodeoxynucleotides
CC (AAC80581-C80723). The oligonucleotide are at least 10 bases long
CC and comprise one of the generic sequences 5'-NNNT-CpG-WNNN-3' or
CC 5'-RY-CpG-RY-3'. The central CpG motif is unmethylated, and the
CC oligonucleotides optionally have phosphorothioate linkages which make
CC them more resistant to degradation. The invention also relates to an
CC oligonucleotide delivery complex comprising an oligonucleotide of the
CC invention and a targetting agent, and a pharmaceutical composition
CC comprising the oligonucleotide delivery complex. The oligonucleotides
CC are able to induce either a cell-mediated (T-cell) response or a humoral
CC (B-cell, antibody) response, with oligonucleotides of the sequence
CC 5'-RY-CpG-RY-3' being able to induce a cell-mediated response, and those
CC of the sequence 5'-NNNT-CpG-WNNN-3' being able to induce a humoral
CC response. It is thought that after administration, the oligonucleotide
CC acts on antigen-presenting cells (e.g., macrophages and dendritic
CC cells), which then release cytokines, leading to activation of natural
CC killer (NK) cells. A cell-mediated or humoral response can then occur by
CC activation of T- or B-cells. The induction of an immune response is
CC useful for treating, preventing or ameliorating an allergic reaction
CC (preferably asthma), or an infection, where an immunogenic CpG
CC oligonucleotide is administered either alone or in combination with an
CC anti-allergenic agent or anti-infectious agent. The allergic conditions
CC which may be treated include eczema, allergic rhinitis, hayfever,
CC urticaria, food allergies and other atopic conditions, and the
CC infections which may be treated include viral, bacterial, fungal and
CC protozoal infections such as tuberculosis, AIDS, leishmania and
CC schistosomiasis. Immune response induction may also be used in the
CC treatment of an autoimmune disorder (e.g., lupus erythematosus,
CC rheumatoid arthritis and multiple sclerosis), a disease associated with
CC immune system deficiency, and symptoms resulting from exposure to an
CC agent of biological warfare. An immunogenic CpG oligonucleotide, either
CC alone or in combination with an anti-cancer agent, is useful for treating
CC solid tumour cancer. The induction of an immune response is used in
CC antisense therapy and to improve the efficacy of a vaccine. The
CC oligonucleotide is preferably administered to lymphocytes ex vivo,
CC producing activated lymphocytes which are then administered to the host.
CC The present sequence represents an immunogenic CpG oligodeoxynucleotide
CC of the invention.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

Query Match 100.0%; Score 20; DB 22; Length 20;
Best Local Similarity 100.0%; Pred. No. 0.075;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 11
AAC80623
ID AAC80623 standard; DNA; 20 BP.
XX
AC AAC80623;
XX
DT 14-FEB-2001 (first entry)
XX
DE Immunogenic CpG oligodeoxynucleotide, SEQ ID NO:43.
XX
KW CpG oligodeoxynucleotide; unmethylated; antigen-presenting cell;
KW immunogenic; cytokine release; natural killer cell; NK cell activation;
KW cell-mediated immune response; T-cell response; humoral response;
KW B-cell response; antibody production; immune response induction;
KW vaccine; allergy; asthma; infection; bacterial; viral; fungal; protozoal;
KW parasitic; tuberculosis; AIDS; autoimmune disease; lupus erythematosus;
KW rheumatoid arthritis; multiple sclerosis; solid tumour; cancer;
KW immune deficiency; biological warfare agent; cytostatic; antiarthritic;
KW antimicrobial; antiallergic; protozoacide; tuberculostatic;
KW antiasthmatic; dermatological; phosphorothioate; ss.
XX
OS Synthetic.
XX
PN WO200061151-A2.
XX
PD 19-OCT-2000.
XX
PF 12-APR-2000; 2000WO-US09839.
XX
PR 12-APR-1999; 99US-0128898.
XX
PA (KLIN/) KLINMAN D.
PA (ISHI/) ISHII K.
PA (VERT/) VERTHELYI D.
XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-006880/01.
XX
PT Novel oligonucleotides useful for the prevention and treatment of
PT allergies, cancer, and autoimmune disorders and for ameliorating
PT symptoms resulting from exposure to a bio-warfare agent -
XX
PS Claim 4; Page 30; 46pp; English.
XX
CC The invention relates to novel immunogenic CpG oligodeoxynucleotides
CC (AAC80581-C80723). The oligonucleotide are at least 10 bases long
CC and comprise one of the generic sequences 5'-NNNT-CpG-WNNN-3' or
CC 5'-RY-CpG-RY-3'. The central CpG motif is unmethylated, and the
CC oligonucleotides optionally have phosphorothioate linkages which make
CC them more resistant to degradation. The invention also relates to an
CC oligonucleotide delivery complex comprising an oligonucleotide of the
CC invention and a targetting agent, and a pharmaceutical composition
CC comprising the oligonucleotide delivery complex. The oligonucleotides
CC are able to induce either a cell-mediated (T-cell) response or a humoral
CC (B-cell, antibody) response, with oligonucleotides of the sequence
CC 5'-RY-CpG-RY-3' being able to induce a cell-mediated response, and those
CC of the sequence 5'-NNNT-CpG-WNNN-3' being able to induce a humoral
CC response. It is thought that after administration, the oligonucleotide

CC acts on antigen-presenting cells (e.g., macrophages and dendritic
CC cells), which then release cytokines, leading to activation of natural
CC killer (NK) cells. A cell-mediated or humoral response can then occur by
CC activation of T- or B-cells. The induction of an immune response is
CC useful for treating, preventing or ameliorating an allergic reaction
CC (preferably asthma), or an infection, where an immunogenic CpG
CC oligonucleotide is administered either alone or in combination with an
CC anti-allergenic agent or anti-infectious agent. The allergic conditions
CC which may be treated include eczema, allergic rhinitis, hayfever,
CC urticaria, food allergies and other atopic conditions, and the
CC infections which may be treated include viral, bacterial, fungal and
CC protozoal infections such as tuberculosis, AIDS, leishmania and
CC schistosomiasis. Immune response induction may also be used in the
CC treatment of an autoimmune disorder (e.g., lupus erythematosus,
CC rheumatoid arthritis and multiple sclerosis), a disease associated with
CC immune system deficiency, and symptoms resulting from exposure to an
CC agent of biological warfare. An immunogenic CpG oligonucleotide, either
CC alone or in combination with an anti-cancer agent, is useful for treating
CC solid tumour cancer. The induction of an immune response is used in
CC antisense therapy and to improve the efficacy of a vaccine. The
CC oligonucleotide is preferably administered to lymphocytes ex vivo,
CC producing activated lymphocytes which are then administered to the host.
CC The present sequence represents an immunogenic CpG oligodeoxynucleotide
CC of the invention.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

Query Match 100.0%; Score 20; DB 22; Length 20;
Best Local Similarity 100.0%; Pred. No. 0.075;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 12
AAC80652
ID AAC80652 standard; DNA; 20 BP.
XX
AC AAC80652;
XX
DT 14-FEB-2001 (first entry)
XX
DE Immunogenic CpG oligodeoxynucleotide, SEQ ID NO:72.
XX
KW CpG oligodeoxynucleotide; unmethylated; antigen-presenting cell;
KW immunogenic; cytokine release; natural killer cell; NK cell activation;
KW cell-mediated immune response; T-cell response; humoral response;
KW B-cell response; antibody production; immune response induction;
KW vaccine; allergy; asthma; infection; bacterial; viral; fungal; protozoal;
KW parasitic; tuberculosis; AIDS; autoimmune disease; lupus erythematosus;
KW rheumatoid arthritis; multiple sclerosis; solid tumour; cancer;
KW immune deficiency; biological warfare agent; cytostatic; antiarthritic;
KW antimicrobial; antiallergic; protozoacide; tuberculostatic;
KW antiasthmatic; dermatological; phosphorothioate; ss.
XX
OS Synthetic.
XX
PN WO200061151-A2.
XX
PD 19-OCT-2000.
XX
PF 12-APR-2000; 2000WO-US09839.
XX
PR 12-APR-1999; 99US-0128898.
XX
PA (KLIN/) KLINMAN D.
PA (ISHI/) ISHII K.
PA (VERT/) VERTHELYI D.
XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-006880/01.
XX
PT Novel oligonucleotides useful for the prevention and treatment of
PT allergies, cancer, and autoimmune disorders and for ameliorating
PT symptoms resulting from exposure to a bio-warfare agent -
XX
PS Claim 4; Page 35; 46pp; English.
XX
CC The invention relates to novel immunogenic CpG oligodeoxynucleotides
CC (AAC80581-C80723). The oligonucleotide are at least 10 bases long
CC and comprise one of the generic sequences 5'-NNNT-CpG-WNNN-3' or
CC 5'-RY-CpG-RY-3'. The central CpG motif is unmethylated, and the
CC oligonucleotides optionally have phosphorothioate linkages which make
CC them more resistant to degradation. The invention also relates to an
CC oligonucleotide delivery complex comprising an oligonucleotide of the
CC invention and a targetting agent, and a pharmaceutical composition
CC comprising the oligonucleotide delivery complex. The oligonucleotides
CC are able to induce either a cell-mediated (T-cell) response or a humoral
CC (B-cell, antibody) response, with oligonucleotides of the sequence
CC 5'-RY-CpG-RY-3' being able to induce a cell-mediated response, and those
CC of the sequence 5'-NNNT-CpG-WNNN-3' being able to induce a humoral
CC response. It is thought that after administration, the oligonucleotide
CC acts on antigen-presenting cells (e.g., macrophages and dendritic
CC cells), which then release cytokines, leading to activation of natural
CC killer (NK) cells. A cell-mediated or humoral response can then occur by
CC activation of T- or B-cells. The induction of an immune response is
CC useful for treating, preventing or ameliorating an allergic reaction
CC (preferably asthma), or an infection, where an immunogenic CpG
CC oligonucleotide is administered either alone or in combination with an
CC anti-allergenic agent or anti-infectious agent. The allergic conditions
CC which may be treated include eczema, allergic rhinitis, hayfever,
CC urticaria, food allergies and other atopic conditions, and the
CC infections which may be treated include viral, bacterial, fungal and
CC protozoal infections such as tuberculosis, AIDS, leishmania and
CC schistosomiasis. Immune response induction may also be used in the
CC treatment of an autoimmune disorder (e.g., lupus erythematosus,
CC rheumatoid arthritis and multiple sclerosis), a disease associated with
CC immune system deficiency, and symptoms resulting from exposure to an
CC agent of biological warfare. An immunogenic CpG oligonucleotide, either
CC alone or in combination with an anti-cancer agent, is useful for treating
CC solid tumour cancer. The induction of an immune response is used in
CC antisense therapy and to improve the efficacy of a vaccine. The
CC oligonucleotide is preferably administered to lymphocytes ex vivo,
CC producing activated lymphocytes which are then administered to the host.
CC The present sequence represents an immunogenic CpG oligodeoxynucleotide
CC of the invention.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

Query Match 100.0%; Score 20; DB 22; Length 20;
Best Local Similarity 100.0%; Pred. No. 0.075;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
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Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 13
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ID ABK46460 standard; DNA; 20 BP.
XX
AC ABK46460;
XX
DT 05-JUN-2002 (first entry)
XX
DE Immunostimulatory unmethylated CpG oligodideoxynucleotide #50.
XX
KW unmethylated CpG; oligdideoxynucleotide; ODN; virucide; vaccine;
KW Paramyxoviridae; F protein; respiratory syncytial virus; RSV;
KW viral bronchiolitis; pneumonia; infectious pulmonary disease;
KW bronchopulmonary dysplasia; congenital heart condition; ss.
XX

OS Synthetic.
XX
PN WO200211761-A2.
XX
PD 14-FEB-2002.
XX
PF 09-AUG-2001; 2001WO-US41633.
XX
PR 10-AUG-2000; 2000US-224011P.
PR 01-SEP-2000; 2000US-229307P.
XX
PA (JACK-) JACKSON FOUND ADVANCEMENT MILITARY MED.
XX
PI Mond JJ, Prince G, Klinman DM;
XX
DR WPI; 2002-227118/28.
XX
PT Vaccine for immunising patient against respiratory syncytial virus, has
PT epitopes of Paramyxoviridae F protein, and cytosine followed by guanine
PT linked by phosphate bond-oligodideoxynucleotides -
XX
PS Claim 4; Page 8; 30pp; English.
XX
CC The invention describes a vaccine comprising one or more epitopes of a
CC Paramyxoviridae F protein, and one or more CpG (cytosine followed by
CC guanine linked by phosphate bond)-oligodideoxynucleotides (ODNs). The
CC vaccine is useful for vaccinating a patient especially against viruses
CC of the Paramyxoviridae family e.g. respiratory syncytial virus (RSV),
CC the primary cause of viral bronchiolitis and pneumonia in infants and
CC children, and infectious pulmonary disease in infants. RSV has been
CC particularly implicated in death of infants that are premature, have
CC bronchopulmonary dysplasia, or congenital heart conditions. This
CC sequence represents an oligodideoxynucleotide that can be used in the
CC creation of the vaccine.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

Query Match 100.0%; Score 20; DB 24; Length 20;
Best Local Similarity 100.0%; Pred. No. 0.075;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
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Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 14
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ID ABK46462 standard; DNA; 20 BP.
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AC ABK46462;
XX
DT 05-JUN-2002 (first entry)
XX
DE Immunostimulatory unmethylated CpG oligodideoxynucleotide #52.
XX
KW unmethylated CpG; oligdideoxynucleotide; ODN; virucide; vaccine;
KW Paramyxoviridae; F protein; respiratory syncytial virus; RSV;
KW viral bronchiolitis; pneumonia; infectious pulmonary disease;
KW bronchopulmonary dysplasia; congenital heart condition; ss.
XX
OS Synthetic.
XX
PN WO200211761-A2.
XX
PD 14-FEB-2002.
XX
PF 09-AUG-2001; 2001WO-US41633.
XX
PR 10-AUG-2000; 2000US-224011P.
PR 01-SEP-2000; 2000US-229307P.
XX
PA (JACK-) JACKSON FOUND ADVANCEMENT MILITARY MED.
XX
PI Mond JJ, Prince G, Klinman DM;
XX
DR WPI; 2002-227118/28.
XX
PT Vaccine for immunising patient against respiratory syncytial virus, has
PT epitopes of Paramyxoviridae F protein, and cytosine followed by guanine
PT linked by phosphate bond-oligodideoxynucleotides -
XX
PS Claim 4; Page 8; 30pp; English.
XX
CC The invention describes a vaccine comprising one or more epitopes of a
CC Paramyxoviridae F protein, and one or more CpG (cytosine followed by
CC guanine linked by phosphate bond)-oligodideoxynucleotides (ODNs). The
CC vaccine is useful for vaccinating a patient especially against viruses
CC of the Paramyxoviridae family e.g. respiratory syncytial virus (RSV),
CC the primary cause of viral bronchiolitis and pneumonia in infants and
CC children, and infectious pulmonary disease in infants. RSV has been
CC particularly implicated in death of infants that are premature, have
CC bronchopulmonary dysplasia, or congenital heart conditions. This
CC sequence represents an oligodideoxynucleotide that can be used in the
CC creation of the vaccine.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

Query Match 100.0%; Score 20; DB 24; Length 20;
Best Local Similarity 100.0%; Pred. No. 0.075;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
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Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 15
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ID ABK46465 standard; DNA; 20 BP.
XX
AC ABK46465;
XX
DT 05-JUN-2002 (first entry)
XX
DE Immunostimulatory unmethylated CpG oligodideoxynucleotide #55.
XX
KW unmethylated CpG; oligdideoxynucleotide; ODN; virucide; vaccine;
KW Paramyxoviridae; F protein; respiratory syncytial virus; RSV;
KW viral bronchiolitis; pneumonia; infectious pulmonary disease;
KW bronchopulmonary dysplasia; congenital heart condition; ss.
XX
OS Synthetic.
XX
PN WO200211761-A2.
XX
PD 14-FEB-2002.
XX
PF 09-AUG-2001; 2001WO-US41633.
XX
PR 10-AUG-2000; 2000US-224011P.
PR 01-SEP-2000; 2000US-229307P.
XX
PA (JACK-) JACKSON FOUND ADVANCEMENT MILITARY MED.
XX
PI Mond JJ, Prince G, Klinman DM;
XX
DR WPI; 2002-227118/28.
XX
PT Vaccine for immunising patient against respiratory syncytial virus, has
PT epitopes of Paramyxoviridae F protein, and cytosine followed by guanine
PT linked by phosphate bond-oligodideoxynucleotides -
XX
PS Claim 4; Page 8; 30pp; English.
XX
CC The invention describes a vaccine comprising one or more epitopes of a

CC Paramyxoviridae F protein, and one or more CpG (cytosine followed by
CC guanine linked by phosphate bond)-oligodideoxynucleotides (ODNs). The
CC vaccine is useful for vaccinating a patient especially against viruses
CC of the Paramyxoviridae family e.g. respiratory syncytial virus (RSV),
CC the primary cause of viral bronchiolitis and pneumonia in infants and
CC children, and infectious pulmonary disease in infants. RSV has been
CC particularly implicated in death of infants that are premature, have
CC bronchopulmonary dysplasia, or congenital heart conditions. This
CC sequence represents an oligodideoxynucleotide that can be used in the
CC creation of the vaccine.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

Query Match 100.0%; Score 20; DB 24; Length 20;
Best Local Similarity 100.0%; Pred. No. 0.075;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 GGTGCATCGATGCAGGGGGG 20
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Db          1 GGTGCATCGATGCAGGGGGG 20
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Job time : 123.235 secs

GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: January 20, 2004, 17:24:48 ; Search time 31.4706 Seconds
(without alignments)
280.505 Million cell updates/sec

Title: US-10-068-160-54
Perfect score: 20
Sequence: 1 ggtgcatcgatgcaggggg 20

Scoring table: OLIGO_NUC
Gapop 60.0 , Gapext 60.0

Searched: 569978 seqs, 220691566 residues

Word size : 0

Total number of hits satisfying chosen parameters: 955846

Minimum DB seq length: 0
Maximum DB seq length: 500

Post-processing: Listing first 45 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	Result No.	Score	% Query Match	Length	DB	ID	Description
c	1	13	65.0	31	1	US-08-433-126A-137	Sequence 137, App
c	2	13	65.0	31	1	US-08-433-124A-137	Sequence 137, App
c	3	13	65.0	31	3	US-08-976-413A-137	Sequence 137, App
c	4	13	65.0	31	5	PCT-US96-06059-137	Sequence 137, App
c	5	13	65.0	38	1	US-08-433-126A-138	Sequence 138, App
c	6	13	65.0	38	1	US-08-433-124A-138	Sequence 138, App
c	7	13	65.0	38	3	US-08-976-413A-138	Sequence 138, App
c	8	13	65.0	38	5	PCT-US96-06059-138	Sequence 138, App
c	9	13	65.0	87	1	US-08-433-126A-59	Sequence 59, Appl
c	10	13	65.0	87	1	US-08-433-124A-59	Sequence 59, Appl
c	11	13	65.0	87	3	US-08-976-413A-59	Sequence 59, Appl
c	12	13	65.0	87	5	PCT-US96-06059-59	Sequence 59, Appl
c	13	13	65.0	306	2	US-08-630-822A-91	Sequence 91, Appl
c	14	13	65.0	306	2	US-09-005-069-91	Sequence 91, Appl
c	15	13	65.0	306	4	US-09-171-156A-40	Sequence 40, Appl
c	16	13	65.0	306	4	US-09-004-730A-40	Sequence 40, Appl
c	17	13	65.0	306	4	US-08-981-799A-40	Sequence 40, Appl
	18	12	60.0	38	2	US-08-464-257-7	Sequence 7, Appli
	19	12	60.0	38	2	US-09-062-375-7	Sequence 7, Appli
	20	12	60.0	38	3	US-09-203-796A-7	Sequence 7, Appli
c	21	12	60.0	63	3	US-09-237-712-67	Sequence 67, Appl
c	22	12	60.0	171	4	US-09-187-108-3	Sequence 3, Appli
c	23	12	60.0	171	6	5466585-4	Patent No. 5466585
c	24	12	60.0	226	4	US-09-016-434-272	Sequence 272, App
c	25	12	60.0	253	4	US-09-187-108-5	Sequence 5, Appli
c	26	12	60.0	253	6	5466585-5	Patent No. 5466585
	27	12	60.0	306	2	US-08-630-822A-91	Sequence 91, Appl
	28	12	60.0	306	2	US-09-005-069-91	Sequence 91, Appl
	29	12	60.0	306	4	US-09-171-156A-40	Sequence 40, Appl
	30	12	60.0	306	4	US-09-004-730A-40	Sequence 40, Appl
	31	12	60.0	306	4	US-08-981-799A-40	Sequence 40, Appl
c	32	12	60.0	411	4	US-09-615-192A-179	Sequence 179, App
	33	11	55.0	17	4	US-09-371-772B-4239	Sequence 4239, Ap
	34	11	55.0	20	2	US-08-602-725-13	Sequence 13, Appl
c	35	11	55.0	26	1	US-07-832-905B-70	Sequence 70, Appl
c	36	11	55.0	26	2	US-08-700-757-70	Sequence 70, Appl
c	37	11	55.0	26	4	US-09-123-728-1	Sequence 1, Appli
	38	11	55.0	37	3	US-08-558-935-5	Sequence 5, Appli
	39	11	55.0	37	3	US-09-411-687A-13	Sequence 13, Appl
c	40	11	55.0	37	3	US-09-411-687A-13	Sequence 13, Appl
c	41	11	55.0	38	2	US-08-464-257-7	Sequence 7, Appli
c	42	11	55.0	38	2	US-09-062-375-7	Sequence 7, Appli
c	43	11	55.0	38	3	US-09-203-796A-7	Sequence 7, Appli
	44	11	55.0	45	1	US-08-089-862-7	Sequence 7, Appli
	45	11	55.0	45	1	US-08-587-333-14	Sequence 14, Appl

ALIGNMENTS

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RESULT 1
US-08-433-126A-137/c
; Sequence 137, Application US/08433126A
; Patent No. 5688935
;  GENERAL INFORMATION:
;    APPLICANT:  STEPHENS, ANDREW
;    APPLICANT:  SCHNEIDER, DAN
;    APPLICANT:  GOLD, LARRY
;    TITLE OF INVENTION:  NUCLEIC ACID LIGANDS OF TISSUE
;    TITLE OF INVENTION:  TARGET
;    NUMBER OF SEQUENCES:  241
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Swanson & Bratschun, L.L.C.
;      STREET:  8400 E. Prentice Avenue, Suite 200
;      CITY:  Englewood
;      STATE:  Colorado
;      COUNTRY:  USA
;      ZIP:  80111
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette, 3 1/2 diskette, 1.44 MG
;      COMPUTER:  IBM pc compatible
;      OPERATING SYSTEM:  MS-DOS
;      SOFTWARE:  WordPerfect 6.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/433,126A
;      FILING DATE:  03 MAY 1995
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/714,131
;      FILING DATE:  10-JUNE-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/536,428
;      FILING DATE:  11-JUNE-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/964,624
;      FILING DATE:  21-OCTOBER-1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Barry J. Swanson
;      REGISTRATION NUMBER:  33,215
;      REFERENCE/DOCKET NUMBER:  NEX31.2
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (303) 793-3333
;      TELEFAX:  (303) 793-3433
;  INFORMATION FOR SEQ ID NO:  137:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  31 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    FEATURE:
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;      OTHER INFORMATION:  All C's are 2'-F cytosine
;    FEATURE:
;      OTHER INFORMATION:  All U's are 2'-F uracil
US-08-433-126A-137

  Query Match             65.0%;  Score 13;  DB 1;  Length 31;
  Best Local Similarity   100.0%;  Pred. No. 55;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          6 ATCGATGCAGGGG 18
              |||||||||||||
Db         13 ATCGATGCAGGGG 1


RESULT 2
US-08-433-124A-137/c
; Sequence 137, Application US/08433124A
; Patent No. 5750342
;  GENERAL INFORMATION:
;    APPLICANT:  STEPHENS, ANDREW
;    APPLICANT:  SCHNEIDER, DAN
;    APPLICANT:  GOLD, LARRY
;    TITLE OF INVENTION:  NUCLEIC ACID LIGANDS OF TISSUE
;    TITLE OF INVENTION:  TARGET
;    NUMBER OF SEQUENCES:  241
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Swanson & Bratschun, L.L.C.
;      STREET:  8400 E. Prentice Avenue, Suite 200
;      CITY:  Englewood
;      STATE:  Colorado
;      COUNTRY:  USA
;      ZIP:  80111
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette, 3 1/2 diskette, 1.44 MG
;      COMPUTER:  IBM pc compatible
;      OPERATING SYSTEM:  MS-DOS
;      SOFTWARE:  WordPerfect 6.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/433,124A
;      FILING DATE:  03 MAY 1995
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/714,131
;      FILING DATE:  10-JUNE-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/536,428
;      FILING DATE:  11-JUNE-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/964,624
;      FILING DATE:  21-OCTOBER-1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Barry J. Swanson
;      REGISTRATION NUMBER:  33,215
;      REFERENCE/DOCKET NUMBER:  NEX31.2
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (303) 793-3333
;      TELEFAX:  (303) 793-3433
;  INFORMATION FOR SEQ ID NO:  137:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  31 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    FEATURE:
;      OTHER INFORMATION:  All C's are 2'-F cytosine
;    FEATURE:
;      OTHER INFORMATION:  All U's are 2'-F uracil
US-08-433-124A-137

  Query Match             65.0%;  Score 13;  DB 1;  Length 31;
  Best Local Similarity   100.0%;  Pred. No. 55;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          6 ATCGATGCAGGGG 18
              |||||||||||||
Db         13 ATCGATGCAGGGG 1


RESULT 3
US-08-976-413A-137/c
; Sequence 137, Application US/08976413A
; Patent No. 6127119
;  GENERAL INFORMATION:
;    APPLICANT:  STEPHENS, ANDREW
;    APPLICANT:  GOLD, LARRY
;    APPLICANT:  SPECK, ULRICH
;    TITLE OF INVENTION:  NUCLEIC ACID LIGANDS OF TISSUE TARGET
;    NUMBER OF SEQUENCES:  440
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Swanson & Bratschun, L.L.C.
;      STREET:  8400 E. Prentice Avenue, Suite 200
;      CITY:  Englewood
;      STATE:  Colorado
;      COUNTRY:  USA
;      ZIP:  80111
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette, 3 1/2 diskette, 1.44 MG
;      COMPUTER:  IBM pc compatible
;      OPERATING SYSTEM:  MS-DOS
;      SOFTWARE:  WordPerfect 8.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/976,413A
;      FILING DATE:  21-NOVEMBER-1997
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/433,124
;      FILING DATE:  03-MAY-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/714,131
;      FILING DATE:  10-JUNE-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/536,428
;      FILING DATE:  11-JUNE-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/964,624
;      FILING DATE:  21-OCTOBER-1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Barry J. Swanson
;      REGISTRATION NUMBER:  33,215
;      REFERENCE/DOCKET NUMBER:  NEX31/CIP
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (303) 793-3333
;      TELEFAX:  (303) 793-3433
;  INFORMATION FOR SEQ ID NO:  137:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  31 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    FEATURE:
;      OTHER INFORMATION:  All C's are 2'-F cytosine
;    FEATURE:
;      OTHER INFORMATION:  All U's are 2'-F uracil
US-08-976-413A-137

  Query Match             65.0%;  Score 13;  DB 3;  Length 31;
  Best Local Similarity   100.0%;  Pred. No. 55;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          6 ATCGATGCAGGGG 18
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Db         13 ATCGATGCAGGGG 1


RESULT 4
PCT-US96-06059-137/c
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; Sequence 137, Application PC/TUS9606059
;  GENERAL INFORMATION:
;    APPLICANT:  STEPHENS, ANDREW
;    APPLICANT:  SCHNEIDER, DAN
;    APPLICANT:  GOLD, LARRY
;    TITLE OF INVENTION:  NUCLEIC ACID LIGANDS OF TISSUE
;    TITLE OF INVENTION:  TARGET
;    NUMBER OF SEQUENCES:  241
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Swanson & Bratschun, L.L.C.
;      STREET:  8400 E. Prentice Avenue, Suite 200
;      CITY:  Englewood
;      STATE:  Colorado
;      COUNTRY:  USA
;      ZIP:  80111
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette, 3 1/2 diskette, 1.44 MG
;      COMPUTER:  IBM pc compatible
;      OPERATING SYSTEM:  MS-DOS
;      SOFTWARE:  WordPerfect 6.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/US96/06059
;      FILING DATE:
;      CLASSIFICATION:
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;      APPLICATION NUMBER:  08/433,124
;      FILING DATE:  03-MAY-1995
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;      FILING DATE:  03-MAY-1995
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;      APPLICATION NUMBER:  07/714,131
;      FILING DATE:  10-JUNE-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/536,428
;      FILING DATE:  11-JUNE-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/964,624
;      FILING DATE:  21-OCTOBER-1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Barry J. Swanson
;      REGISTRATION NUMBER:  33,215
;      REFERENCE/DOCKET NUMBER:  NEX31.2
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (303) 793-3333
;      TELEFAX:  (303) 793-3433
;  INFORMATION FOR SEQ ID NO:  137:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  31 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    FEATURE:
;      OTHER INFORMATION:  All C's are 2'-F cytosine
;    FEATURE:
;      OTHER INFORMATION:  All U's are 2'-F uracil
PCT-US96-06059-137

  Query Match             65.0%;  Score 13;  DB 5;  Length 31;
  Best Local Similarity   100.0%;  Pred. No. 55;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          6 ATCGATGCAGGGG 18
              |||||||||||||
Db         13 ATCGATGCAGGGG 1


RESULT 5
US-08-433-126A-138/c
; Sequence 138, Application US/08433126A
; Patent No. 5688935
;  GENERAL INFORMATION:
;    APPLICANT:  STEPHENS, ANDREW
;    APPLICANT:  SCHNEIDER, DAN
;    APPLICANT:  GOLD, LARRY
;    TITLE OF INVENTION:  NUCLEIC ACID LIGANDS OF TISSUE
;    TITLE OF INVENTION:  TARGET
;    NUMBER OF SEQUENCES:  241
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Swanson & Bratschun, L.L.C.
;      STREET:  8400 E. Prentice Avenue, Suite 200
;      CITY:  Englewood
;      STATE:  Colorado
;      COUNTRY:  USA
;      ZIP:  80111
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette, 3 1/2 diskette, 1.44 MG
;      COMPUTER:  IBM pc compatible
;      OPERATING SYSTEM:  MS-DOS
;      SOFTWARE:  WordPerfect 6.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/433,126A
;      FILING DATE:  03 MAY 1995
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/714,131
;      FILING DATE:  10-JUNE-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/536,428
;      FILING DATE:  11-JUNE-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/964,624
;      FILING DATE:  21-OCTOBER-1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Barry J. Swanson
;      REGISTRATION NUMBER:  33,215
;      REFERENCE/DOCKET NUMBER:  NEX31.2
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (303) 793-3333
;      TELEFAX:  (303) 793-3433
;  INFORMATION FOR SEQ ID NO:  138:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  38 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    FEATURE:
;      OTHER INFORMATION:  All C's are 2'-F cytosine
;    FEATURE:
;      OTHER INFORMATION:  All U's are 2'-F uracil
US-08-433-126A-138

  Query Match             65.0%;  Score 13;  DB 1;  Length 38;
  Best Local Similarity   100.0%;  Pred. No. 55;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          6 ATCGATGCAGGGG 18
              |||||||||||||
Db         13 ATCGATGCAGGGG 1


RESULT 6
US-08-433-124A-138/c
; Sequence 138, Application US/08433124A
; Patent No. 5750342
;  GENERAL INFORMATION:
;    APPLICANT:  STEPHENS, ANDREW
;    APPLICANT:  SCHNEIDER, DAN
;    APPLICANT:  GOLD, LARRY
;    TITLE OF INVENTION:  NUCLEIC ACID LIGANDS OF TISSUE
;    TITLE OF INVENTION:  TARGET
;    NUMBER OF SEQUENCES:  241
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Swanson & Bratschun, L.L.C.
;      STREET:  8400 E. Prentice Avenue, Suite 200
;      CITY:  Englewood
```

```
;       STATE:  Colorado
;       COUNTRY:  USA
;       ZIP:  80111
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  Diskette, 3 1/2 diskette, 1.44 MG
;       COMPUTER:  IBM pc compatible
;       OPERATING SYSTEM:  MS-DOS
;       SOFTWARE:  WordPerfect 6.0
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/433,124A
;       FILING DATE:  03 MAY 1995
;       CLASSIFICATION:  435
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  07/714,131
;       FILING DATE:  10-JUNE-1991
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  07/536,428
;       FILING DATE:  11-JUNE-1990
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  07/964,624
;       FILING DATE:  21-OCTOBER-1992
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Barry J. Swanson
;       REGISTRATION NUMBER:  33,215
;       REFERENCE/DOCKET NUMBER:  NEX31.2
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (303) 793-3333
;       TELEFAX:  (303) 793-3433
;   INFORMATION FOR SEQ ID NO:  138:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  38 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
;     FEATURE:
;       OTHER INFORMATION:  All C's are 2'-F cytosine
;     FEATURE:
;       OTHER INFORMATION:  All U's are 2'-F uracil
US-08-433-124A-138

  Query Match             65.0%;  Score 13;  DB 1;  Length 38;
  Best Local Similarity   100.0%;  Pred. No. 55;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          6 ATCGATGCAGGGG 18
              |||||||||||||
Db         13 ATCGATGCAGGGG 1


RESULT 7
US-08-976-413A-138/c
; Sequence 138, Application US/08976413A
; Patent No. 6127119
;  GENERAL INFORMATION:
;    APPLICANT:  STEPHENS, ANDREW
;    APPLICANT:  GOLD, LARRY
;    APPLICANT:  SPECK, ULRICH
;    TITLE OF INVENTION:  NUCLEIC ACID LIGANDS OF TISSUE TARGET
;    NUMBER OF SEQUENCES:  440
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Swanson & Bratschun, L.L.C.
;      STREET:  8400 E. Prentice Avenue, Suite 200
;      CITY:  Englewood
;      STATE:  Colorado
;      COUNTRY:  USA
;      ZIP:  80111
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette, 3 1/2 diskette, 1.44 MG
;      COMPUTER:  IBM pc compatible
;      OPERATING SYSTEM:  MS-DOS
;      SOFTWARE:  WordPerfect 8.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/976,413A
;      FILING DATE:  21-NOVEMBER-1997
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/433,124
;      FILING DATE:  03-MAY-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/714,131
;      FILING DATE:  10-JUNE-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/536,428
;      FILING DATE:  11-JUNE-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/964,624
;      FILING DATE:  21-OCTOBER-1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Barry J. Swanson
;      REGISTRATION NUMBER:  33,215
;      REFERENCE/DOCKET NUMBER:  NEX31/CIP
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (303) 793-3333
;      TELEFAX:  (303) 793-3433
;  INFORMATION FOR SEQ ID NO:  138:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  38 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    FEATURE:
;      OTHER INFORMATION:  All C's are 2'-F cytosine
;    FEATURE:
;      OTHER INFORMATION:  All U's are 2'-F uracil
US-08-976-413A-138

  Query Match             65.0%;  Score 13;  DB 3;  Length 38;
  Best Local Similarity   100.0%;  Pred. No. 55;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          6 ATCGATGCAGGGG 18
              |||||||||||||
Db         13 ATCGATGCAGGGG 1


RESULT 8
PCT-US96-06059-138/c
; Sequence 138, Application PC/TUS9606059
;  GENERAL INFORMATION:
;    APPLICANT:  STEPHENS, ANDREW
;    APPLICANT:  SCHNEIDER, DAN
;    APPLICANT:  GOLD, LARRY
;    TITLE OF INVENTION:  NUCLEIC ACID LIGANDS OF TISSUE
;    TITLE OF INVENTION:  TARGET
;    NUMBER OF SEQUENCES:  241
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Swanson & Bratschun, L.L.C.
;      STREET:  8400 E. Prentice Avenue, Suite 200
;      CITY:  Englewood
;      STATE:  Colorado
;      COUNTRY:  USA
;      ZIP:  80111
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette, 3 1/2 diskette, 1.44 MG
;      COMPUTER:  IBM pc compatible
;      OPERATING SYSTEM:  MS-DOS
;      SOFTWARE:  WordPerfect 6.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/US96/06059
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/433,124
;      FILING DATE:  03-MAY-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/433,126
```

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;      FILING DATE:  03-MAY-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/714,131
;      FILING DATE:  10-JUNE-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/536,428
;      FILING DATE:  11-JUNE-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/964,624
;      FILING DATE:  21-OCTOBER-1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Barry J. Swanson
;      REGISTRATION NUMBER:  33,215
;      REFERENCE/DOCKET NUMBER:  NEX31.2
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (303) 793-3333
;      TELEFAX:  (303) 793-3433
;  INFORMATION FOR SEQ ID NO:  138:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  38 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    FEATURE:
;      OTHER INFORMATION:  All C's are 2'-F cytosine
;    FEATURE:
;      OTHER INFORMATION:  All U's are 2'-F uracil
PCT-US96-06059-138

  Query Match             65.0%;  Score 13;  DB 5;  Length 38;
  Best Local Similarity   100.0%;  Pred. No. 55;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          6 ATCGATGCAGGGG 18
              |||||||||||||
Db         13 ATCGATGCAGGGG 1


RESULT 9
US-08-433-126A-59/c
; Sequence 59, Application US/08433126A
; Patent No. 5688935
;  GENERAL INFORMATION:
;    APPLICANT:  STEPHENS, ANDREW
;    APPLICANT:  SCHNEIDER, DAN
;    APPLICANT:  GOLD, LARRY
;    TITLE OF INVENTION:  NUCLEIC ACID LIGANDS OF TISSUE
;    TITLE OF INVENTION:  TARGET
;    NUMBER OF SEQUENCES:  241
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Swanson & Bratschun, L.L.C.
;      STREET:  8400 E. Prentice Avenue, Suite 200
;      CITY:  Englewood
;      STATE:  Colorado
;      COUNTRY:  USA
;      ZIP:  80111
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette, 3 1/2 diskette, 1.44 MG
;      COMPUTER:  IBM pc compatible
;      OPERATING SYSTEM:  MS-DOS
;      SOFTWARE:  WordPerfect 6.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/433,126A
;      FILING DATE:  03 MAY 1995
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/714,131
;      FILING DATE:  10-JUNE-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/536,428
;      FILING DATE:  11-JUNE-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/964,624
;      FILING DATE:  21-OCTOBER-1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Barry J. Swanson
;      REGISTRATION NUMBER:  33,215
;      REFERENCE/DOCKET NUMBER:  NEX31.2
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (303) 793-3333
;      TELEFAX:  (303) 793-3433
;  INFORMATION FOR SEQ ID NO:  59:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  87 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    FEATURE:
;      OTHER INFORMATION:  All C's are 2'-F cytosine
;    FEATURE:
;      OTHER INFORMATION:  All U's are 2'-F uracil
US-08-433-126A-59

  Query Match             65.0%;  Score 13;  DB 1;  Length 87;
  Best Local Similarity   100.0%;  Pred. No. 56;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          6 ATCGATGCAGGGG 18
              |||||||||||||
Db         50 ATCGATGCAGGGG 38


RESULT 10
US-08-433-124A-59/c
; Sequence 59, Application US/08433124A
; Patent No. 5750342
;  GENERAL INFORMATION:
;    APPLICANT:  STEPHENS, ANDREW
;    APPLICANT:  SCHNEIDER, DAN
;    APPLICANT:  GOLD, LARRY
;    TITLE OF INVENTION:  NUCLEIC ACID LIGANDS OF TISSUE
;    TITLE OF INVENTION:  TARGET
;    NUMBER OF SEQUENCES:  241
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Swanson & Bratschun, L.L.C.
;      STREET:  8400 E. Prentice Avenue, Suite 200
;      CITY:  Englewood
;      STATE:  Colorado
;      COUNTRY:  USA
;      ZIP:  80111
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette, 3 1/2 diskette, 1.44 MG
;      COMPUTER:  IBM pc compatible
;      OPERATING SYSTEM:  MS-DOS
;      SOFTWARE:  WordPerfect 6.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/433,124A
;      FILING DATE:  03 MAY 1995
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/714,131
;      FILING DATE:  10-JUNE-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/536,428
;      FILING DATE:  11-JUNE-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/964,624
;      FILING DATE:  21-OCTOBER-1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Barry J. Swanson
;      REGISTRATION NUMBER:  33,215
;      REFERENCE/DOCKET NUMBER:  NEX31.2
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (303) 793-3333
;      TELEFAX:  (303) 793-3433
;  INFORMATION FOR SEQ ID NO:  59:
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;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  87 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    FEATURE:
;      OTHER INFORMATION:  All C's are 2'-F cytosine
;    FEATURE:
;      OTHER INFORMATION:  All U's are 2'-F uracil
US-08-433-124A-59

  Query Match             65.0%;  Score 13;  DB 1;  Length 87;
  Best Local Similarity   100.0%;  Pred. No. 56;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          6 ATCGATGCAGGGG 18
              |||||||||||||
Db         50 ATCGATGCAGGGG 38


RESULT 11
US-08-976-413A-59/c
; Sequence 59, Application US/08976413A
; Patent No. 6127119
;  GENERAL INFORMATION:
;    APPLICANT:  STEPHENS, ANDREW
;    APPLICANT:  GOLD, LARRY
;    APPLICANT:  SPECK, ULRICH
;    TITLE OF INVENTION:  NUCLEIC ACID LIGANDS OF TISSUE TARGET
;    NUMBER OF SEQUENCES:  440
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Swanson & Bratschun, L.L.C.
;      STREET:  8400 E. Prentice Avenue, Suite 200
;      CITY:  Englewood
;      STATE:  Colorado
;      COUNTRY:  USA
;      ZIP:  80111
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette, 3 1/2 diskette, 1.44 MG
;      COMPUTER:  IBM pc compatible
;      OPERATING SYSTEM:  MS-DOS
;      SOFTWARE:  WordPerfect 8.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/976,413A
;      FILING DATE:  21-NOVEMBER-1997
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/433,124
;      FILING DATE:  03-MAY-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/714,131
;      FILING DATE:  10-JUNE-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/536,428
;      FILING DATE:  11-JUNE-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/964,624
;      FILING DATE:  21-OCTOBER-1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Barry J. Swanson
;      REGISTRATION NUMBER:  33,215
;      REFERENCE/DOCKET NUMBER:  NEX31/CIP
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (303) 793-3333
;      TELEFAX:  (303) 793-3433
;  INFORMATION FOR SEQ ID NO:  59:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  87 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    FEATURE:
;      OTHER INFORMATION:  All C's are 2'-F cytosine
;    FEATURE:
;      OTHER INFORMATION:  All U's are 2'-F uracil
US-08-976-413A-59

  Query Match             65.0%;  Score 13;  DB 3;  Length 87;
  Best Local Similarity   100.0%;  Pred. No. 56;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          6 ATCGATGCAGGGG 18
              |||||||||||||
Db         50 ATCGATGCAGGGG 38


RESULT 12
PCT-US96-06059-59/c
; Sequence 59, Application PC/TUS9606059
;  GENERAL INFORMATION:
;    APPLICANT:  STEPHENS, ANDREW
;    APPLICANT:  SCHNEIDER, DAN
;    APPLICANT:  GOLD, LARRY
;    TITLE OF INVENTION:  NUCLEIC ACID LIGANDS OF TISSUE
;    TITLE OF INVENTION:  TARGET
;    NUMBER OF SEQUENCES:  241
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Swanson & Bratschun, L.L.C.
;      STREET:  8400 E. Prentice Avenue, Suite 200
;      CITY:  Englewood
;      STATE:  Colorado
;      COUNTRY:  USA
;      ZIP:  80111
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette, 3 1/2 diskette, 1.44 MG
;      COMPUTER:  IBM pc compatible
;      OPERATING SYSTEM:  MS-DOS
;      SOFTWARE:  WordPerfect 6.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/US96/06059
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/433,124
;      FILING DATE:  03-MAY-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/433,126
;      FILING DATE:  03-MAY-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/714,131
;      FILING DATE:  10-JUNE-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/536,428
;      FILING DATE:  11-JUNE-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/964,624
;      FILING DATE:  21-OCTOBER-1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Barry J. Swanson
;      REGISTRATION NUMBER:  33,215
;      REFERENCE/DOCKET NUMBER:  NEX31.2
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (303) 793-3333
;      TELEFAX:  (303) 793-3433
;  INFORMATION FOR SEQ ID NO:  59:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  87 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    FEATURE:
;      OTHER INFORMATION:  All C's are 2'-F cytosine
;    FEATURE:
;      OTHER INFORMATION:  All U's are 2'-F uracil
PCT-US96-06059-59
```

```
  Query Match             65.0%;  Score 13;  DB 5;  Length 87;
  Best Local Similarity   100.0%;  Pred. No. 56;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          6 ATCGATGCAGGGG 18
              |||||||||||||
Db         50 ATCGATGCAGGGG 38


RESULT 13
US-08-630-822A-91/c
; Sequence 91, Application US/08630822A
; Patent No. 5840695
;  GENERAL INFORMATION:
;    APPLICANT:  FRANK, GLENN R.
;    APPLICANT:  HUNTER, SHIRLEY WU
;    APPLICANT:  WALLENFELS, LYNDA
;    TITLE OF INVENTION:  NOVEL ECTOPARASITE SALIVA PROTEINS
;    TITLE OF INVENTION:  AND APPARATUS TO COLLECT SUCH PROTEINS
;    NUMBER OF SEQUENCES:  107
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Sheridan Ross P.C.
;      STREET:  1700 Lincoln Street, Suite 3500
;      CITY:  Denver
;      STATE:  Colorado
;      COUNTRY:  U.S.A.
;      ZIP:  80203
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/630,822A
;      FILING DATE:  11-APR-1996
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  CONNELL, GARY J.
;      REGISTRATION NUMBER:  32,020
;      REFERENCE/DOCKET NUMBER:  2618-17-C3
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (303) 863-9700
;      TELEFAX:  (303) 863-0223
;  INFORMATION FOR SEQ ID NO:  91:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  306 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
US-08-630-822A-91

  Query Match             65.0%;  Score 13;  DB 2;  Length 306;
  Best Local Similarity   100.0%;  Pred. No. 57;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 GTGCATCGATGCA 14
              |||||||||||||
Db         74 GTGCATCGATGCA 62


RESULT 14
US-09-005-069-91/c
; Sequence 91, Application US/09005069
; Patent No. 5932470
;  GENERAL INFORMATION:
;    APPLICANT:  FRANK, GLENN R.
;    APPLICANT:  HUNTER, SHIRLEY WU
;    APPLICANT:  WALLENFELS, LYNDA
;    TITLE OF INVENTION:  NOVEL ECTOPARASITE SALIVA PROTEINS
;    TITLE OF INVENTION:  AND APPARATUS TO COLLECT SUCH PROTEINS
;    NUMBER OF SEQUENCES:  107
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Sheridan Ross P.C.
;      STREET:  1700 Lincoln Street, Suite 3500
;      CITY:  Denver
;      STATE:  Colorado
;      COUNTRY:  U.S.A.
;      ZIP:  80203
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/005,069
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/630,822
;      FILING DATE:  11-APR-1996
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  CONNELL, GARY J.
;      REGISTRATION NUMBER:  32,020
;      REFERENCE/DOCKET NUMBER:  2618-17-C3
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (303) 863-9700
;      TELEFAX:  (303) 863-0223
;  INFORMATION FOR SEQ ID NO:  91:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  306 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
US-09-005-069-91

  Query Match             65.0%;  Score 13;  DB 2;  Length 306;
  Best Local Similarity   100.0%;  Pred. No. 57;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 GTGCATCGATGCA 14
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Db         74 GTGCATCGATGCA 62


RESULT 15
US-09-171-156A-40/c
; Sequence 40, Application US/09171156A
; Patent No. 6368846
;  GENERAL INFORMATION:
;       APPLICANT: Hunter, Shirley Wu
;                  Sim, Gek-Kee
;                  Weber, Eric R.
;       TITLE OF INVENTION: NOVEL ECTOPARASITE SALIVA PROTEINS AND
;                           APPARATUS TO COLLECT SUCH PROTEINS
;       NUMBER OF SEQUENCES: 88
;       CORRESPONDENCE ADDRESS:
;            ADDRESSEE: SHERIDAN ROSS P.C.
;            STREET: 1560 BROADWAY, SUITE 1200
;            CITY: DENVER
;            STATE: CO
;            COUNTRY: U.S.A.
;            ZIP: 80202
;       COMPUTER READABLE FORM:
;            MEDIUM TYPE: Floppy disk
;            COMPUTER: IBM PC compatible
;            OPERATING SYSTEM: PC-DOS/MS-DOS
;            SOFTWARE: PatentIn Release #1.0, Version #1.30
;       CURRENT APPLICATION DATA:
;            APPLICATION NUMBER: US/09/171,156A
;            FILING DATE: 04-Mar-1999
;            CLASSIFICATION: <Unknown>
;       ATTORNEY/AGENT INFORMATION:
;            NAME: Connell, Gary J.
;            REGISTRATION NUMBER: 32,020
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; REFERENCE/DOCKET NUMBER: 2618-17-C4-PUS
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 303/863-9700
; TELEFAX: 303/863-0223
; INFORMATION FOR SEQ ID NO: 40:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 306 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: cDNA
; SEQUENCE DESCRIPTION: SEQ ID NO: 40:
US-09-171-156A-40

Query Match 65.0%; Score 13; DB 4; Length 306;
Best Local Similarity 100.0%; Pred. No. 57;
Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          2 GTGCATCGATGCA 14
              |||||||||||||
Db         74 GTGCATCGATGCA 62
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Search completed: January 20, 2004, 20:03:11
Job time : 32.4706 secs

GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: January 20, 2004, 18:44:59 ; Search time 132.941 Seconds
(without alignments)
530.274 Million cell updates/sec

Title: US-10-068-160-54
Perfect score: 20
Sequence: 1 ggtgcatcgatgcaggggggg 20

Scoring table: OLIGO_NUC
Gapop 60.0 , Gapext 60.0

Searched: 2324096 seqs, 1762381658 residues

Word size : 0

Total number of hits satisfying chosen parameters: 2392556

Minimum DB seq length: 0
Maximum DB seq length: 500

Post-processing: Listing first 45 summaries

Database : Published_Applications_NA:*
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2: /cgn2_6/ptodata/1/pubpna/PCT_NEW_PUB.seq:*
3: /cgn2_6/ptodata/1/pubpna/US06_NEW_PUB.seq:*
4: /cgn2_6/ptodata/1/pubpna/US06_PUBCOMB.seq:*
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13: /cgn2_6/ptodata/1/pubpna/US09_NEW_PUB.seq2:*
14: /cgn2_6/ptodata/1/pubpna/US10A_PUBCOMB.seq:*
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16: /cgn2_6/ptodata/1/pubpna/US10_NEW_PUB.seq:*
17: /cgn2_6/ptodata/1/pubpna/US60_NEW_PUB.seq:*
18: /cgn2_6/ptodata/1/pubpna/US60_PUBCOMB.seq:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	20	100.0	20	13	US-10-194-035-32	Sequence 32, Appl
2	20	100.0	20	13	US-10-194-035-34	Sequence 34, Appl
3	20	100.0	20	13	US-10-194-035-37	Sequence 37, Appl
4	20	100.0	20	13	US-10-194-035-38	Sequence 38, Appl
5	20	100.0	20	13	US-10-194-035-43	Sequence 43, Appl
6	20	100.0	20	13	US-10-194-035-72	Sequence 72, Appl
7	20	100.0	20	15	US-10-068-160-1	Sequence 1, Appli
8	20	100.0	20	15	US-10-068-160-54	Sequence 54, Appl
9	19	95.0	19	13	US-10-194-035-53	Sequence 53, Appl
10	19	95.0	19	13	US-10-194-035-73	Sequence 73, Appl
11	18	90.0	18	15	US-10-068-160-12	Sequence 12, Appl
12	18	90.0	20	15	US-10-068-160-38	Sequence 38, Appl
13	17	85.0	17	13	US-10-194-035-27	Sequence 27, Appl
14	16	80.0	16	13	US-10-194-035-71	Sequence 71, Appl
15	15	75.0	20	15	US-10-068-160-65	Sequence 65, Appl
16	14	70.0	18	15	US-10-068-160-16	Sequence 16, Appl
17	14	70.0	20	13	US-10-194-035-40	Sequence 40, Appl
18	14	70.0	20	13	US-10-194-035-81	Sequence 81, Appl
19	14	70.0	20	13	US-10-194-035-82	Sequence 82, Appl
20	14	70.0	20	13	US-10-194-035-102	Sequence 102, App
21	14	70.0	20	15	US-10-068-160-7	Sequence 7, Appli
22	14	70.0	20	15	US-10-068-160-26	Sequence 26, Appl
c 23	14	70.0	20	15	US-10-068-160-38	Sequence 38, Appl
24	14	70.0	20	15	US-10-068-160-44	Sequence 44, Appl
25	14	70.0	20	15	US-10-068-160-49	Sequence 49, Appl
26	14	70.0	50	10	US-09-978-295A-294	Sequence 294, App
27	14	70.0	50	10	US-09-978-697-294	Sequence 294, App
28	14	70.0	50	10	US-09-978-192A-294	Sequence 294, App
29	14	70.0	50	10	US-09-999-832A-294	Sequence 294, App
30	14	70.0	50	11	US-09-978-189-294	Sequence 294, App
31	14	70.0	50	11	US-09-978-608A-294	Sequence 294, App
32	14	70.0	50	11	US-09-978-585A-294	Sequence 294, App
33	14	70.0	50	11	US-09-978-191A-294	Sequence 294, App
34	14	70.0	50	11	US-09-978-403A-294	Sequence 294, App
35	14	70.0	50	11	US-09-978-564A-294	Sequence 294, App
36	14	70.0	50	11	US-09-999-833A-294	Sequence 294, App
37	14	70.0	50	11	US-09-981-915A-294	Sequence 294, App
38	14	70.0	50	11	US-09-978-824-294	Sequence 294, App
39	14	70.0	50	11	US-09-918-585A-294	Sequence 294, App
40	14	70.0	50	11	US-09-978-423A-294	Sequence 294, App
41	14	70.0	50	11	US-09-978-193A-294	Sequence 294, App
42	14	70.0	50	11	US-09-999-830A-294	Sequence 294, App
43	14	70.0	50	11	US-09-978-757A-294	Sequence 294, App
44	14	70.0	50	11	US-09-978-187B-294	Sequence 294, App
45	14	70.0	50	11	US-09-978-643A-294	Sequence 294, App

ALIGNMENTS

RESULT 1
US-10-194-035-32
; Sequence 32, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
; APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
; APPLICANT: SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
; APPLICANT: KLINMAN, Dennis
; APPLICANT: ISHII, Ken
; APPLICANT: VERTHELYI, Daniela
; TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
; FILE REFERENCE: 4239-63317
; CURRENT APPLICATION NUMBER: US/10/194,035
; CURRENT FILING DATE: 2002-07-12
; PRIOR APPLICATION NUMBER: PCT/US01/01122
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: US 60/176,115
; PRIOR FILING DATE: 2000-01-14
; NUMBER OF SEQ ID NOS: 119
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 32
; LENGTH: 20
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-32

Query Match 100.0%; Score 20; DB 13; Length 20;
Best Local Similarity 100.0%; Pred. No. 0.036;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 2

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US-10-194-035-34
; Sequence 34, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
;  APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
;  APPLICANT:  SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
;  APPLICANT:  KLINMAN, Dennis
;  APPLICANT:  ISHII, Ken
;  APPLICANT:  VERTHELYI, Daniela
;  TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
;  FILE REFERENCE: 4239-63317
;  CURRENT APPLICATION NUMBER: US/10/194,035
;  CURRENT FILING DATE:  2002-07-12
;  PRIOR APPLICATION NUMBER: PCT/US01/01122
;  PRIOR FILING DATE: 2001-07-19
;  PRIOR APPLICATION NUMBER: US 60/176,115
;  PRIOR FILING DATE: 2000-01-14
;  NUMBER OF SEQ ID NOS: 119
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 34
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-34

  Query Match             100.0%;  Score 20;  DB 13;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 0.036;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20
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RESULT 3
US-10-194-035-37
; Sequence 37, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
;  APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
;  APPLICANT:  SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
;  APPLICANT:  KLINMAN, Dennis
;  APPLICANT:  ISHII, Ken
;  APPLICANT:  VERTHELYI, Daniela
;  TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
;  FILE REFERENCE: 4239-63317
;  CURRENT APPLICATION NUMBER: US/10/194,035
;  CURRENT FILING DATE:  2002-07-12
;  PRIOR APPLICATION NUMBER: PCT/US01/01122
;  PRIOR FILING DATE: 2001-07-19
;  PRIOR APPLICATION NUMBER: US 60/176,115
;  PRIOR FILING DATE: 2000-01-14
;  NUMBER OF SEQ ID NOS: 119
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 37
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-37

  Query Match             100.0%;  Score 20;  DB 13;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 0.036;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20
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RESULT 4
US-10-194-035-38
; Sequence 38, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
;  APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
;  APPLICANT:  SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
;  APPLICANT:  KLINMAN, Dennis
;  APPLICANT:  ISHII, Ken
;  APPLICANT:  VERTHELYI, Daniela
;  TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
;  FILE REFERENCE: 4239-63317
;  CURRENT APPLICATION NUMBER: US/10/194,035
;  CURRENT FILING DATE:  2002-07-12
;  PRIOR APPLICATION NUMBER: PCT/US01/01122
;  PRIOR FILING DATE: 2001-07-19
;  PRIOR APPLICATION NUMBER: US 60/176,115
;  PRIOR FILING DATE: 2000-01-14
;  NUMBER OF SEQ ID NOS: 119
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 38
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-38

  Query Match             100.0%;  Score 20;  DB 13;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 0.036;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20
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RESULT 5
US-10-194-035-43
; Sequence 43, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
;  APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
;  APPLICANT:  SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
;  APPLICANT:  KLINMAN, Dennis
;  APPLICANT:  ISHII, Ken
;  APPLICANT:  VERTHELYI, Daniela
;  TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
;  FILE REFERENCE: 4239-63317
;  CURRENT APPLICATION NUMBER: US/10/194,035
;  CURRENT FILING DATE:  2002-07-12
;  PRIOR APPLICATION NUMBER: PCT/US01/01122
;  PRIOR FILING DATE: 2001-07-19
;  PRIOR APPLICATION NUMBER: US 60/176,115
;  PRIOR FILING DATE: 2000-01-14
;  NUMBER OF SEQ ID NOS: 119
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 43
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-43

  Query Match             100.0%;  Score 20;  DB 13;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 0.036;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20
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RESULT 6
US-10-194-035-72
; Sequence 72, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
;  APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
;  APPLICANT:  SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
;  APPLICANT:  KLINMAN, Dennis
;  APPLICANT:  ISHII, Ken
;  APPLICANT:  VERTHELYI, Daniela
;  TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
;  FILE REFERENCE: 4239-63317
;  CURRENT APPLICATION NUMBER: US/10/194,035
;  CURRENT FILING DATE:  2002-07-12
;  PRIOR APPLICATION NUMBER: PCT/US01/01122
;  PRIOR FILING DATE: 2001-07-19
;  PRIOR APPLICATION NUMBER: US 60/176,115
;  PRIOR FILING DATE: 2000-01-14
;  NUMBER OF SEQ ID NOS: 119
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 72
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-72

  Query Match             100.0%;  Score 20;  DB 13;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 0.036;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 7
US-10-068-160-1
; Sequence 1, Application US/10068160
; Publication No. US20030060440A1
; GENERAL INFORMATION:
;  APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA, REPRESENTED BY THE
;  APPLICANT:  SECRETARY, DEPARTMENT OF HEALTH AND HUMAN SERVICES
;  APPLICANT:  KLINMAN, Dennis
;  APPLICANT:  ISHII, Ken
;  APPLICANT:  VERTHELYI, Daniela
;  TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
;  FILE REFERENCE: 4239-61999
;  CURRENT APPLICATION NUMBER: US/10/068,160
;  CURRENT FILING DATE:  2002-02-06
;  PRIOR APPLICATION NUMBER: 60/128,898
;  PRIOR FILING DATE: 1999-04-12
;  NUMBER OF SEQ ID NOS: 120
;  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 1
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Oligonucleotide
US-10-068-160-1

  Query Match             100.0%;  Score 20;  DB 15;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 0.036;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 8
US-10-068-160-54
; Sequence 54, Application US/10068160
; Publication No. US20030060440A1
; GENERAL INFORMATION:
;  APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA, REPRESENTED BY THE
;  APPLICANT:  SECRETARY, DEPARTMENT OF HEALTH AND HUMAN SERVICES
;  APPLICANT:  KLINMAN, Dennis
;  APPLICANT:  ISHII, Ken
;  APPLICANT:  VERTHELYI, Daniela
;  TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
;  FILE REFERENCE: 4239-61999
;  CURRENT APPLICATION NUMBER: US/10/068,160
;  CURRENT FILING DATE:  2002-02-06
;  PRIOR APPLICATION NUMBER: 60/128,898
;  PRIOR FILING DATE: 1999-04-12
;  NUMBER OF SEQ ID NOS: 120
;  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 54
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Oligonucleotide
US-10-068-160-54

  Query Match             100.0%;  Score 20;  DB 15;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 0.036;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 9
US-10-194-035-53
; Sequence 53, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
;  APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
;  APPLICANT:  SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
;  APPLICANT:  KLINMAN, Dennis
;  APPLICANT:  ISHII, Ken
;  APPLICANT:  VERTHELYI, Daniela
;  TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
;  FILE REFERENCE: 4239-63317
;  CURRENT APPLICATION NUMBER: US/10/194,035
;  CURRENT FILING DATE:  2002-07-12
;  PRIOR APPLICATION NUMBER: PCT/US01/01122
;  PRIOR FILING DATE: 2001-07-19
;  PRIOR APPLICATION NUMBER: US 60/176,115
;  PRIOR FILING DATE: 2000-01-14
;  NUMBER OF SEQ ID NOS: 119
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 53
;   LENGTH: 19
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-53

  Query Match             95.0%;  Score 19;  DB 13;  Length 19;
  Best Local Similarity   100.0%;  Pred. No. 0.14;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGG 19
              |||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGG 19


RESULT 10
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US-10-194-035-73
; Sequence 73, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
;  APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
;  APPLICANT:  SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
;  APPLICANT:  KLINMAN, Dennis
;  APPLICANT:  ISHII, Ken
;  APPLICANT:  VERTHELYI, Daniela
;  TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
;  FILE REFERENCE: 4239-63317
;  CURRENT APPLICATION NUMBER: US/10/194,035
;  CURRENT FILING DATE:  2002-07-12
;  PRIOR APPLICATION NUMBER: PCT/US01/01122
;  PRIOR FILING DATE: 2001-07-19
;  PRIOR APPLICATION NUMBER: US 60/176,115
;  PRIOR FILING DATE: 2000-01-14
;  NUMBER OF SEQ ID NOS: 119
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 73
;   LENGTH: 19
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-73

  Query Match             95.0%;  Score 19;  DB 13;  Length 19;
  Best Local Similarity   100.0%;  Pred. No. 0.14;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGG 19
              |||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGG 19


RESULT 11
US-10-068-160-12
; Sequence 12, Application US/10068160
; Publication No. US20030060440A1
; GENERAL INFORMATION:
;  APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA, REPRESENTED BY THE
;  APPLICANT:  SECRETARY, DEPARTMENT OF HEALTH AND HUMAN SERVICES
;  APPLICANT:  KLINMAN, Dennis
;  APPLICANT:  ISHII, Ken
;  APPLICANT:  VERTHELYI, Daniela
;  TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
;  FILE REFERENCE: 4239-61999
;  CURRENT APPLICATION NUMBER: US/10/068,160
;  CURRENT FILING DATE:  2002-02-06
;  PRIOR APPLICATION NUMBER: 60/128,898
;  PRIOR FILING DATE: 1999-04-12
;  NUMBER OF SEQ ID NOS: 120
;  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 12
;   LENGTH: 18
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Oligonucleotide
US-10-068-160-12

  Query Match             90.0%;  Score 18;  DB 15;  Length 18;
  Best Local Similarity   100.0%;  Pred. No. 0.51;
  Matches   18;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          3 TGCATCGATGCAGGGGGG 20
              ||||||||||||||||||
Db          1 TGCATCGATGCAGGGGGG 18


RESULT 12
US-10-068-160-38
; Sequence 38, Application US/10068160
; Publication No. US20030060440A1
; GENERAL INFORMATION:
;  APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA, REPRESENTED BY THE
;  APPLICANT:  SECRETARY, DEPARTMENT OF HEALTH AND HUMAN SERVICES
;  APPLICANT:  KLINMAN, Dennis
;  APPLICANT:  ISHII, Ken
;  APPLICANT:  VERTHELYI, Daniela
;  TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
;  FILE REFERENCE: 4239-61999
;  CURRENT APPLICATION NUMBER: US/10/068,160
;  CURRENT FILING DATE:  2002-02-06
;  PRIOR APPLICATION NUMBER: 60/128,898
;  PRIOR FILING DATE: 1999-04-12
;  NUMBER OF SEQ ID NOS: 120
;  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 38
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Oligonucleotide
US-10-068-160-38

  Query Match             90.0%;  Score 18;  DB 15;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 0.51;
  Matches   18;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          3 TGCATCGATGCAGGGGGG 20
              ||||||||||||||||||
Db          3 TGCATCGATGCAGGGGGG 20


RESULT 13
US-10-194-035-27
; Sequence 27, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
;  APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
;  APPLICANT:  SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
;  APPLICANT:  KLINMAN, Dennis
;  APPLICANT:  ISHII, Ken
;  APPLICANT:  VERTHELYI, Daniela
;  TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
;  FILE REFERENCE: 4239-63317
;  CURRENT APPLICATION NUMBER: US/10/194,035
;  CURRENT FILING DATE:  2002-07-12
;  PRIOR APPLICATION NUMBER: PCT/US01/01122
;  PRIOR FILING DATE: 2001-07-19
;  PRIOR APPLICATION NUMBER: US 60/176,115
;  PRIOR FILING DATE: 2000-01-14
;  NUMBER OF SEQ ID NOS: 119
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 27
;   LENGTH: 17
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-27

  Query Match             85.0%;  Score 17;  DB 13;  Length 17;
  Best Local Similarity   100.0%;  Pred. No. 1.9;
  Matches   17;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGG 17
              |||||||||||||||||
Db          1 GGTGCATCGATGCAGGG 17


RESULT 14
US-10-194-035-71
; Sequence 71, Application US/10194035
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; Publication No. US20030144229A1
; GENERAL INFORMATION:
;  APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
;  APPLICANT:  SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
;  APPLICANT:  KLINMAN, Dennis
;  APPLICANT:  ISHII, Ken
;  APPLICANT:  VERTHELYI, Daniela
;  TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
;  FILE REFERENCE: 4239-63317
;  CURRENT APPLICATION NUMBER: US/10/194,035
;  CURRENT FILING DATE:  2002-07-12
;  PRIOR APPLICATION NUMBER: PCT/US01/01122
;  PRIOR FILING DATE: 2001-07-19
;  PRIOR APPLICATION NUMBER: US 60/176,115
;  PRIOR FILING DATE: 2000-01-14
;  NUMBER OF SEQ ID NOS: 119
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 71
;   LENGTH: 16
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-71

  Query Match             80.0%;  Score 16;  DB 13;  Length 16;
  Best Local Similarity   100.0%;  Pred. No. 7.4;
  Matches   16;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGG 16
              ||||||||||||||||
Db          1 GGTGCATCGATGCAGG 16


RESULT 15
US-10-068-160-65
; Sequence 65, Application US/10068160
; Publication No. US20030060440A1
; GENERAL INFORMATION:
;  APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA, REPRESENTED BY THE
;  APPLICANT:  SECRETARY, DEPARTMENT OF HEALTH AND HUMAN SERVICES
;  APPLICANT:  KLINMAN, Dennis
;  APPLICANT:  ISHII, Ken
;  APPLICANT:  VERTHELYI, Daniela
;  TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
;  FILE REFERENCE: 4239-61999
;  CURRENT APPLICATION NUMBER: US/10/068,160
;  CURRENT FILING DATE:  2002-02-06
;  PRIOR APPLICATION NUMBER: 60/128,898
;  PRIOR FILING DATE: 1999-04-12
;  NUMBER OF SEQ ID NOS: 120
;  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 65
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Oligonucleotide
US-10-068-160-65

  Query Match             75.0%;  Score 15;  DB 15;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 27;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          6 ATCGATGCAGGGGGG 20
              |||||||||||||||
Db          6 ATCGATGCAGGGGGG 20


Search completed: January 20, 2004, 20:51:02
Job time : 133.941 secs
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GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: January 20, 2004, 17:17:18 ; Search time 1226.76 Seconds
(without alignments)
396.237 Million cell updates/sec

Title: US-10-068-160-54
Perfect score: 20
Sequence: 1 ggtgcatcgatgcaggggggg 20

Scoring table: OLIGO_NUC
Gapop 60.0 , Gapext 60.0

Searched: 22781392 seqs, 12152238056 residues

Word size : 0

Total number of hits satisfying chosen parameters: 21849362

Minimum DB seq length: 0
Maximum DB seq length: 500

Post-processing: Listing first 45 summaries

Database : EST:*
1: em_estba:*
2: em_esthum:*
3: em_estin:*
4: em_estmu:*
5: em_estov:*
6: em_estpl:*
7: em_estro:*
8: em_htc:*
9: gb_est1:*
10: gb_est2:*
11: gb_htc:*
12: gb_est3:*
13: gb_est4:*
14: gb_est5:*
15: em_estfun:*
16: em_estom:*
17: em_gss_hum:*
18: em_gss_inv:*
19: em_gss_pln:*
20: em_gss_vrt:*
21: em_gss_fun:*
22: em_gss_mam:*
23: em_gss_mus:*
24: em_gss_pro:*
25: em_gss_rod:*
26: em_gss_phg:*
27: em_gss_vrl:*
28: gb_gss1:*
29: gb_gss2:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.		Score	% Query Match	Length	DB	ID	Description
1		15	75.0	177	12	BJ193666	BJ193666 BJ193666
2	c	15	75.0	210	13	BQ703645	BQ703645 EST672 al
3	c	15	75.0	211	14	CA854145	CA854145 EST1175 a
4		15	75.0	374	14	CB966250	CB966250 NL34_G07
5	c	14	70.0	113	28	BH861949	BH861949 SALK_0883
6		14	70.0	207	13	BQ380106	BQ380106 RC1-UT001
7		14	70.0	249	9	AV993468	AV993468 AV993468
8	c	14	70.0	249	28	BH220641	BH220641 1006096A0
9		14	70.0	285	2	HSM073336	Bx483168 Homo sapi
10		14	70.0	292	12	BM856929	BM856929 K-EST0141
11	c	14	70.0	306	13	BW097424	BW097424 BW097424
12		14	70.0	329	9	AW415097	AW415097 49143 MAR
13	c	14	70.0	352	28	BH019162	BH019162 L242k.d_H
14		14	70.0	360	9	AA066330	AA066330 mm14e06.r
15		14	70.0	363	14	CB391692	CB391692 OSTF156H5
16		14	70.0	365	9	AA930446	AA930446 vs59g06.r
17		14	70.0	365	14	CA654361	CA654361 wre1n.pk1
18		14	70.0	375	13	BW238122	BW238122 BW238122
19		14	70.0	397	9	AW145716	AW145716 ga33h05.y
20		14	70.0	399	12	BG815202	BG815202 dac02d03.
21		14	70.0	407	9	AA223768	AA223768 zr10a06.r
22	c	14	70.0	415	9	AI036275	AI036275 vl83f10.r
23	c	14	70.0	424	28	AQ214130	AQ214130 HS_2187_B
24	c	14	70.0	425	10	BF293321	BF293321 WHE2155_C
25	c	14	70.0	434	28	AQ927254	AQ927254 RPCI-23-2
26	c	14	70.0	442	14	CA706144	CA706144 wdk1c.pk0
27	c	14	70.0	477	28	BH605338	BH605338 BOHHS53TF
28		14	70.0	484	29	CC059869	CC059869 ii36a09.b
29		14	70.0	486	10	BE026564	BE026564 db28c05.x
30		14	70.0	487	13	BW220988	BW220988 BW220988
31		14	70.0	489	12	BM785652	BM785652 K-EST0064
32		14	70.0	489	13	BQ102588	BQ102588 MINm172 M
33	c	14	70.0	493	29	CC354887	CC354887 PUHNQ64TB
34		14	70.0	494	14	W79399	W79399 zd81c01.r1
35		14	70.0	496	9	AU129448	AU129448 AU129448
36	c	14	70.0	498	13	BU003989	BU003989 QGG37C11.
37		13	65.0	91	9	AA853766	AA853766 NHTBCae08
38		13	65.0	142	9	AU077261	AU077261 AU077261
39		13	65.0	166	12	BM447256	BM447256 DSA008A01
40	c	13	65.0	181	9	AA749807	AA749807 ISAS0074
41		13	65.0	185	14	CB038739	CB038739 Tc_ad2_49
42		13	65.0	194	14	CB038491	CB038491 Tc_ad2_46
43		13	65.0	220	14	CB037470	CB037470 Tc_ad2_34
44		13	65.0	223	12	BM704378	BM704378 UI-E-CI1-
45		13	65.0	230	29	BZ674942	BZ674942 PUBHU18TD

ALIGNMENTS

RESULT 1
BJ193666
LOCUS BJ193666 177 bp mRNA linear EST 24-JAN-2002
DEFINITION BJ193666 normalized full length cDNA library, chloronemata, caulonemata and rhizoid-like protonemata Physcomitrella patens subsp. patens cDNA clone pphn19j13 5', mRNA sequence.
ACCESSION BJ193666
VERSION BJ193666.1 GI:18361600
KEYWORDS EST.
SOURCE Physcomitrella patens subsp. patens
ORGANISM Physcomitrella patens subsp. patens
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Bryophyta; Bryopsida; Funariidae; Funariales; Funariaceae; Physcomitrella.
REFERENCE 1 (bases 1 to 177)
AUTHORS Fujita,T., Shin-i,T., Seki,M., Kamiya,A., Uchiyama,I., Nishiyama,T., Carninci,P., Hayashizaki,Y., Shinozaki,K., Kohara,Y. and Hasebe,M.
TITLE Comparison of the moss Physcomitrella patens genome with flowering plants genome
JOURNAL Unpublished
COMMENT Contact: Tadasu Shin-i
Center For Genetic Resource Information
National Institute of Genetics
1111 Yata, Mishima, Shizuoka 411-8540, Japan
Tel: 81-559-81-6856
Fax: 81-559-81-6855
Email: tshini@genes.nig.ac.jp

A backbone of the vector is pBluescript II, that was in vivo excised from a modified lPS phage vector (Mo bi Tec, Germany). XhoI digested-5' end of cDNA is ligated to SalI site of the vector, and the BamHI digested-3' end including poly-A tail is ligated to BamHI site of the vector. cDNA instert could be amplified with conventional T7 and T3 primers. This normarized full- length cDNA library was generated basically according to the method described in Genome Research 10, 1617-1630 (2000), Carninci, P. et al. Protonemata were blended by the POLYTRON, and then cultivated on the BCD medium containing luM NAA (naphthalene acetic acid) for 8 to 11 days under the continuous light.

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FEATURES             Location/Qualifiers
     source          1. .177
                     /organism="Physcomitrella patens subsp. patens"
                     /mol_type="mRNA"
                     /sub_species="patens"
                     /db_xref="taxon:145481"
                     /clone="pphn19j13"
                     /tissue_type="mixture of chloronemata, caulonemata and
                     rhizoid-like protonemata"
                     /clone_lib="normalized full length cDNA library,
                     chloronemata, caulonemata and rhizoid-like protonemata"
BASE COUNT       31 a     31 c     58 g     57 t
ORIGIN

  Query Match             75.0%;  Score 15;  DB 12;  Length 177;
  Best Local Similarity   100.0%;  Pred. No. 6.5e+02;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          6 ATCGATGCAGGGGGG 20
              |||||||||||||||
Db        154 ATCGATGCAGGGGGG 168


RESULT 2
BQ703645/c
LOCUS       BQ703645                210 bp    mRNA    linear   EST 01-MAY-2003
DEFINITION  EST672 almond cDNA library Prunus dulcis cDNA 5', mRNA sequence.
ACCESSION   BQ703645
VERSION     BQ703645.1  GI:30271226
KEYWORDS    EST.
SOURCE      Prunus dulcis (almond)
  ORGANISM  Prunus dulcis
            Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
            Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; rosids
            ; eurosids I; Rosales; Rosaceae; Amygdaloideae; Prunus.
REFERENCE   1  (bases 1 to 210)
  AUTHORS   Jiang,Y.Q. and Ma,R.C.
  TITLE     Generation and Analysis of 814 Expressed Sequence Tags from Almond
            (Prunus dulcis) Pistils
  JOURNAL   Unpublished (2002)
COMMENT     Contact: Jiang YQ, Ma RC
            Lab of Plant Functional Genomics
            Beijing Agro-biotechnology Research Center
            Banjing Cun, No.301, Haidian Dis., Beijing 100089, P.R. China
            Tel: 8610 5150 3831
            Fax: 8610 5150 3980
            Email: rcma1@yahoo.com
            Insert Length: 210   Std Error: 0.00
            Seq primer: M13/pUC reverse primer
            POLYA=Yes.
FEATURES             Location/Qualifiers
     source          1. .210
                     /organism="Prunus dulcis"
                     /mol_type="mRNA"
                     /db_xref="taxon:3755"
                     /tissue_type="pistils"
                     /clone_lib="almond cDNA library"
                     /note="Organ: flower; Vector: pZL1; Site_1: Sal I; Site_2:
                     Not I; Total RNAs were isolated from pistils using Trizol
                     reagent (Invitrogen, USA). Then, polyA+ mRNA was isolated
                     using oligo(dT) cellulose as described. cDNA was
                     synthesized using a lambda-zipLox cDNA synthesis kit(CAT
                     No.19643-014, Invitrogen, USA). The phage library was
                     converted through mass excision to a plasmid library in
                     the vector pZL1. The plasmid library was plated on 15-cm
                     LB agar plates with 100ug/mL ampicillin. Individual clones
                     were picked at random and propagated. The 5'ends of the
                     cDNA clones were sequenced on ABI Prism377 DNA sequencer."
BASE COUNT       80 a     29 c     39 g     62 t
ORIGIN

  Query Match             75.0%;  Score 15;  DB 13;  Length 210;
  Best Local Similarity   100.0%;  Pred. No. 6.5e+02;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          3 TGCATCGATGCAGGG 17
              |||||||||||||||
Db        119 TGCATCGATGCAGGG 105


RESULT 3
CA854145/c
LOCUS       CA854145                211 bp    mRNA    linear   EST 01-MAY-2003
DEFINITION  EST1175 almond cDNA library Prunus dulcis cDNA 5', mRNA sequence.
ACCESSION   CA854145
VERSION     CA854145.1  GI:30271704
KEYWORDS    EST.
SOURCE      Prunus dulcis (almond)
  ORGANISM  Prunus dulcis
            Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
            Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; rosids
            ; eurosids I; Rosales; Rosaceae; Amygdaloideae; Prunus.
REFERENCE   1  (bases 1 to 211)
  AUTHORS   Jiang,Y.Q. and Ma,R.C.
  TITLE     Generation and Analysis of Expressed Sequence Tags from Almond
            (Prunus dulcis) Pistils
  JOURNAL   Unpublished
COMMENT     Contact: Jiang YQ, Ma RC
            Lab of Plant Functional Genomics
            Beijing Agro-biotechnology Research Center
            Banjing Cun, No.301, Haidian Dis., Beijing 100089, P.R. China
            Tel: 8610 5150 3831
            Fax: 8610 5150 3980
            Email: rcma1@yahoo.com
            Insert Length: 211   Std Error: 0.00
            Seq primer: M13/pUC reverse primer
            POLYA=Yes.
FEATURES             Location/Qualifiers
     source          1. .211
                     /organism="Prunus dulcis"
                     /mol_type="mRNA"
                     /db_xref="taxon:3755"
                     /tissue_type="pistils"
                     /clone_lib="almond cDNA library"
                     /note="Organ: flower; Vector: pZL1; Site_1: Sal I; Site_2:
                     Not I; Total RNAs were isolated from pistils using Trizol
                     reagent (Invitrogen, USA). Then, polyA+ mRNA was isolated
                     using oligo(dT) cellulose as described. cDNA was
                     synthesized using a lambda-zipLox cDNA synthesis kit(CAT
                     No.19643-014, Invitrogen, USA). The phage library was
                     converted through mass excision to a plasmid library in
                     the vector pZL1. The plasmid library was plated on 15-cm
                     LB agar plates with 100ug/mL ampicillin. Individual clones
                     were picked at random and propagated. The 5'ends of the
                     cDNA clones were sequenced on ABI Prism377 DNA sequencer."
BASE COUNT       81 a     29 c     39 g     62 t
ORIGIN

  Query Match             75.0%;  Score 15;  DB 14;  Length 211;
  Best Local Similarity   100.0%;  Pred. No. 6.5e+02;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          3 TGCATCGATGCAGGG 17
              |||||||||||||||
Db        119 TGCATCGATGCAGGG 105
```

```
RESULT 4
CB966250
LOCUS       CB966250                374 bp    mRNA    linear   EST 29-APR-2003
DEFINITION  NL34_G07 Drought stress (leaf) Oryza sativa (indica cultivar-group)
            cDNA clone NL34_G07 3', mRNA sequence.
ACCESSION   CB966250
VERSION     CB966250.1  GI:30228359
KEYWORDS    EST.
SOURCE      Oryza sativa (indica cultivar-group)
  ORGANISM  Oryza sativa (indica cultivar-group)
            Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
            Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
            Ehrhartoideae; Oryzeae; Oryza.
REFERENCE   1  (bases 1 to 374)
  AUTHORS   Markandeya,G., Ravindra Babu,P., Venkat Reddy,B., Nagabhushana,I.,
            Chandra Sekhar,A., Bennetzen,J.L., Ramakrishna,W. and Reddy,A.R.
  TITLE     ESTs from a normalized cDNA library of drought stressed rice
            seedlings (Oryza sativa L.cv Nagina 22)
  JOURNAL   Unpublished
COMMENT     Contact: Reddy AR
            Department of Plant Sciences, School of Life Sciences
            University of Hyderabad
            P.O. Central University, Hyderabad-500 046, A.P, India
            Tel: 0091-40-3010265
            Fax: 0091-40-3010145
            Email: arjulsl@uohyd.ernet.in
            Insert Length: 374   Std Error: 0.00
            Seq primer: CGCCAGGGTTTTCCCAGTCACGAC.
FEATURES             Location/Qualifiers
     source          1. .374
                     /organism="Oryza sativa (indica cultivar-group)"
                     /mol_type="mRNA"
                     /cultivar="Nagina 22 (indica sub sp)"
                     /db_xref="taxon:39946"
                     /clone="NL34_G07"
                     /tissue_type="Entire leaf tissue"
                     /dev_stage="35 day-old seedlings"
                     /clone_lib="Drought stress (leaf)"
                     /note="Organ: Leaf; Vector: T7T3Pac; ESTs from normalized
                     leaf cDNA Library from drought stressed seedlings "
BASE COUNT      106 a    113 c     82 g     73 t
ORIGIN

  Query Match             75.0%;  Score 15;  DB 14;  Length 374;
  Best Local Similarity   100.0%;  Pred. No. 6.4e+02;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 GTGCATCGATGCAGG 16
              |||||||||||||||
Db        335 GTGCATCGATGCAGG 349


RESULT 5
BH861949/c
LOCUS       BH861949                113 bp    DNA     linear   GSS 05-AUG-2002
DEFINITION  SALK_088338 Arabidopsis thaliana TDNA insertion lines Arabidopsis
            thaliana genomic clone SALK_088338, genomic survey sequence.
ACCESSION   BH861949
VERSION     BH861949.1  GI:22097275
KEYWORDS    GSS.
SOURCE      Arabidopsis thaliana (thale cress)
  ORGANISM  Arabidopsis thaliana
            Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
            Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; rosids
            ; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
REFERENCE   1  (bases 1 to 113)
  AUTHORS   Alonso,J.M., Leisse,T.J., Barajas,P., Chen,H., Cheuk,R., Gadrinab
            ,C., Jeske,A., Karnes,M., Kim,C.J., Parker,H., Prednis,L., Shinn,P.
            , Zimmerman,J. and Ecker,J.R.
  TITLE     A Sequence-Indexed Library of Insertion Mutations in the
            Arabidopsis Genome
  JOURNAL   Unpublished
COMMENT     Contact: Joseph R. Ecker
            Salk Institute Genomic Analysis Laboratory (SIGnAL)
            The Salk Institute for Biological Studies
            10010 N. Torrey Pines Road, La Jolla, CA 92037, USA
            Tel: 858 453 4100 x1752
            Fax: 858 558 6379
            Email: ecker@salk.edu
            This is single pass sequence recovered from the left border of
            TDNA. This sequence lies within an annotated intron of At2g42880.
            Class: TDNA tagged.
FEATURES             Location/Qualifiers
     source          1. .113
                     /organism="Arabidopsis thaliana"
                     /mol_type="genomic DNA"
                     /strain="Columbia 0"
                     /db_xref="taxon:3702"
                     /clone="SALK_088338"
                     /clone_lib="Arabidopsis thaliana TDNA insertion lines"
                     /note="PCR was performed on Arabidopsis thaliana lines
                     each of which contains  one or more TDNA insertion
                     elements. The resultant fragment for each  line was
                     directly sequenced to determine the genomic sequence at
                     the  site of insertion. Details of the protocols used can
                     be found at  http://signal.salk.edu/tdna_protocols.html"
BASE COUNT       39 a     23 c     20 g     31 t
ORIGIN

  Query Match             70.0%;  Score 14;  DB 28;  Length 113;
  Best Local Similarity   100.0%;  Pred. No. 2.1e+03;
  Matches   14;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 GTGCATCGATGCAG 15
              ||||||||||||||
Db         63 GTGCATCGATGCAG 50


RESULT 6
BQ380106
LOCUS       BQ380106                207 bp    mRNA    linear   EST 21-MAY-2002
DEFINITION  RC1-UT0012-020800-011-a02_1 UT0012 Homo sapiens cDNA, mRNA
            sequence.
ACCESSION   BQ380106
VERSION     BQ380106.1  GI:21055620
KEYWORDS    EST.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 207)
  AUTHORS   Dias Neto,E., Garcia Correa,R., Verjovski-Almeida,S., Briones,M.R.,
            Nagai,M.A., da Silva,W. Jr., Zago,M.A., Bordin,S., Costa,F.F.,
            Goldman,G.H., Carvalho,A.F., Matsukuma,A., Baia,G.S., Simpson,D.H.,
            Brunstein,A., deOliveira,P.S., Bucher,P., Jongeneel,C.V., O'Hare
            ,M.J., Soares,F., Brentani,R.R., Reis,L.F., de Souza,S.J. and
            Simpson,A.J.
  TITLE     Shotgun sequencing of the human transcriptome with ORF expressed
            sequence tags
  JOURNAL   Proc. Natl. Acad. Sci. U.S.A. 97 (7), 3491-3496 (2000)
  MEDLINE   20202663
   PUBMED   10737800
COMMENT     Contact: Simpson A.J.G.
            Laboratory of Cancer Genetics
            Ludwig Institute for Cancer Research
            Rua Prof. Antonio Prudente 109, 4 andar, 01509-010, Sao Paulo-SP,
            Brazil
            Tel: +55-11-2704922
            Fax: +55-11-2707001
            Email: asimpson@ludwig.org.br
            This sequence was derived from the FAPESP/LICR Human Cancer Genome
            Project. This entry can be seen in the following URL
            (http://www.ludwig.org.br/scripts/gethtml2.pl?t1=RC1&t2=RC1-UT0012-
            020800-011-a02_1&t3=2000-08-02&t4=1)
```

```
           Seq primer: puc 18 forward.
FEATURES             Location/Qualifiers
     source          1. .207
                     /organism="Homo sapiens"
                     /mol_type="mRNA"
                     /db_xref="taxon:9606"
                     /dev_stage="Adult"
                     /clone_lib="UT0012"
                     /note="Organ: uterus_tumor; Vector: puc18; Site_1: SmaI;
                     Site_2: SmaI; A mini-library was made by cloning products
                     derived from  ORESTES PCR (U.S. Letters Patent application
                     No. 196,716 -  Ludwig Institute for Cancer Research)
                     profiles into  the pUC 18 vector. Reverse transcription of
                     tissue mRNA and cDNA amplification were performed under
                     low stringency conditions."
BASE COUNT       62 a     45 c     54 g     46 t
ORIGIN

  Query Match           70.0%;  Score 14;  DB 13;  Length 207;
  Best Local Similarity   100.0%;  Pred. No. 2.1e+03;
  Matches   14;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          6 ATCGATGCAGGGGG 19
              ||||||||||||||
Db        101 ATCGATGCAGGGGG 114


RESULT 7
AV993468
LOCUS       AV993468                 249 bp    mRNA    linear   EST 15-MAR-2002
DEFINITION  AV993468 Nori Satoh unpublished cDNA library, larva Ciona
            intestinalis cDNA clone cilv25g13 5', mRNA sequence.
ACCESSION   AV993468
VERSION     AV993468.1  GI:19484802
KEYWORDS    EST.
SOURCE      Ciona intestinalis
  ORGANISM  Ciona intestinalis
            Eukaryota; Metazoa; Chordata; Urochordata; Ascidiacea; Enterogona;
            Phlebobranchia; Cionidae; Ciona.
REFERENCE   1  (bases 1 to 249)
  AUTHORS   Satoh,N., Satou,Y., Kohara,Y. and Shin-i,T.
  TITLE     Expressed genes in Ciona intestinalis
  JOURNAL   Unpublished
COMMENT     Contact: Nori Satoh
            Department of Zoology
            Kyoto University
            Sakyo-ku, Kyoto, Kyoto 606-8502, Japan
            Tel: 81-75-753-4081
            Fax: 81-75-705-1113
            Email: satoh@ascidian.zool.kyoto-u.ac.jp.
FEATURES             Location/Qualifiers
     source          1. .249
                     /organism="Ciona intestinalis"
                     /mol_type="mRNA"
                     /db_xref="taxon:7719"
                     /clone="cilv25g13"
                     /tissue_type="whole animal"
                     /dev_stage="larva"
                     /clone_lib="Nori Satoh unpublished cDNA library, larva"
BASE COUNT       64 a     49 c     61 g     74 t      1 others
ORIGIN

  Query Match           70.0%;  Score 14;  DB 9;  Length 249;
  Best Local Similarity   100.0%;  Pred. No. 2.1e+03;
  Matches   14;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          6 ATCGATGCAGGGGG 19
              ||||||||||||||
Db         89 ATCGATGCAGGGGG 102


RESULT 8
BH220641/c
```

```
LOCUS       BH220641                 249 bp    DNA     linear   GSS 08-NOV-2001
DEFINITION  1006096A08.x1 1006 - RescueMu Grid G Zea mays genomic, genomic
            survey sequence.
ACCESSION   BH220641
VERSION     BH220641.1  GI:16814900
KEYWORDS    GSS.
SOURCE      Zea mays
  ORGANISM  Zea mays
            Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
            Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACCAD
            clade; Panicoideae; Andropogoneae; Zea.
REFERENCE   1  (bases 1 to 249)
  AUTHORS   Walbot,V.
  TITLE     Maize genomic sequences found using engineered RescueMu transposon
  JOURNAL   Unpublished
COMMENT     Contact: Walbot V
            Department of Biological Sciences
            Stanford University
            855 California Ave, Palo Alto, CA 94304, USA
            Tel: 650 723 2227
            Fax: 650 725 8221
            Email: walbot@stanford.edu
            Plate: 1006096  row: 29
            Class: transposon-tagged.
FEATURES             Location/Qualifiers
     source          1. .249
                     /organism="Zea mays"
                     /mol_type="genomic DNA"
                     /cultivar="mixed background W23/A188/B73"
                     /db_xref="taxon:4577"
                     /tissue_type="leaf"
                     /dev_stage="adult"
                     /lab_host="DH10B"
                     /clone_lib="1006 - RescueMu Grid G"
                     /note="Organ: leaf; Vector: RescueMu (engineered from
                     pBlueScript backbone); Site_1: BamHI; Site_2: BglII;
                     RescueMu is a 4.9 kb, modified maize Mu transposon
                     designed to allow plasmid rescue from total genomic DNA.
                     Mu elements insert preferentially into transcription
                     units. For more information on RescueMu, go to the web
                     site 'www.zmdb.iastate.edu' and follow the links for
                     'RescueMu.' Grid G was grown at Stanford in 2000. DNA was
                     extracted from leaf punches, double digested using BamHI
                     and BglII, and ligated to form circular plasmids. DH10B
                     cells were transformed and then screened on LB plates with
                     ampicillin."
BASE COUNT       44 a     64 c     66 g     75 t
ORIGIN

  Query Match           70.0%;  Score 14;  DB 28;  Length 249;
  Best Local Similarity   100.0%;  Pred. No. 2.1e+03;
  Matches   14;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          3 TGCATCGATGCAGG 16
              ||||||||||||||
Db        243 TGCATCGATGCAGG 230


RESULT 9
HSM073336
ID   HSM073336  standard; RNA; EST; 285 BP.
XX
AC   BX483168;
XX
SV   BX483168.1
XX
DT   09-MAY-2003 (Rel. 75, Created)
DT   09-MAY-2003 (Rel. 75, Last updated, Version 1)
XX
DE   Homo sapiens mRNA; EST DKFZp686B17235_r1  (from clone DKFZp686B17235)
XX
KW   EST; expressed sequence tag.
XX
```

```
OS   Homo sapiens (human)
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia;
OC   Eutheria; Primates; Catarrhini; Hominidae; Homo.
XX
RN   [1]
RP   1-285
RA   Bloecker H., Boecher M., Mewes H.W., Weil B., Amid C., Osanger A., Fobo G.,
RA   Han M., Wiemann S.;
RT   ;
RL   Submitted (07-MAY-2003) to the EMBL/GenBank/DDBJ databases.
RL   MIPS, Ingolstaedter Landstr.1, D-85764 Neuherberg, GERMANY
XX
CC   This is the 5' sequence of the clone insert
CC   Clone from S. Wiemann, Molecular Genome Analysis, German Cancer
CC   Research Center (DKFZ); Email s.wiemann@dkfz-heidelberg.de;
CC   sequenced by GBF (National Research Centre for Biotechnology
CC   Ltd., Braunschweig/Germany) within the cDNA sequencing
CC   consortium of the German Genome Project.
CC   No s1 sequence available.
CC   This clone (DKFZp686B17235) is available at the RZPD in Berlin.
CC   Please contact the RZPD: Ressourcenzentrum, Heubnerweg 6,
CC   14059 Berlin-Charlottenburg, GERMANY; Email: clone@rzpd.de
XX
FH   Key             Location/Qualifiers
FH
FT   source          1. .285
FT                   /db_xref="taxon:9606"
FT                   /mol_type="mRNA"
FT                   /organism="Homo sapiens"
FT                   /clone="DKFZp686B17235"
FT                   /clone_lib="686 (synonym: hlcc3). Vector pSport1_Sfi; host
FT                   DH10B; sites SfiIA + SfiIB"
FT                   /dev_stage="adult"
FT                   /tissue_type="cDNA-collection"
XX
SQ   Sequence 285 BP; 76 A; 77 C; 74 G; 58 T; 0 other;

  Query Match             70.0%;  Score 14;  DB 2;  Length 285;
  Best Local Similarity   100.0%;  Pred. No. 2.1e+03;
  Matches   14;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          5 CATCGATGCAGGGG 18
              ||||||||||||||
Db        214 CATCGATGCAGGGG 227


RESULT 10
BM856929
LOCUS       BM856929                292 bp    mRNA    linear   EST 06-MAR-2002
DEFINITION  K-EST0141064 S21SNU520 Homo sapiens cDNA clone S21SNU520-76-D03 5',
            mRNA sequence.
ACCESSION   BM856929
VERSION     BM856929.1  GI:19213328
KEYWORDS    EST.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 292)
  AUTHORS   Kim,N.S., Hahn,Y., Oh,J.H., Lee,J.Y., Ahn,H.Y., Chu,M.Y., Kim,M.R.,
            Oh,K.J., Cheong,J.E., Sohn,H.Y., Kim,J.M., Park,H.S., Kim,S. and
            Kim,Y.S.
  TITLE     21C Frontier Korean EST Project 2001
  JOURNAL   Unpublished
COMMENT     Contact: Kim YS
            Genome Research Center
            Korea Research Institute of Bioscience & Biotechnology
            52 Eoeun-dong Yuseong-gu, Daejeon 305-333, South Korea
            Tel: +82-42-860-4470
            Fax: +82-42-860-4409
            Email: yongsung@mail.kribb.re.kr
            Plate: 76  row: D  column: 03
            High quality sequence stop: 292.
FEATURES             Location/Qualifiers
     source          1. .292
                     /organism="Homo sapiens"
                     /mol_type="mRNA"
                     /db_xref="taxon:9606"
                     /clone="S21SNU520-76-D03"
                     /sex="F"
                     /tissue_type="Stomach"
                     /cell_type="Floating aggregates"
                     /cell_line="SNU-520"
                     /lab_host="Top10F'"
                     /clone_lib="S21SNU520"
                     /note="Organ: Stomach; Vector: pTZ18RP1; Site_1: EcoRI;
                     Site_2: NotI; The poly (A)+ RNA was dephosphorylated with
                     bacterial alkaline phosphatase (BAP) and then decapped
                     with tabacco acid pyrophosphatase (TAP). The decapped
                     intact mRNA was ligated with DNA-RNA linker including EcoR
                     I site by treatment of T4 RNA ligase and the first strand
                     cDNA was synthesized from oligo dT-selected mRNA by
                     priming with dT-tailed vector. The dT-tailed vector was
                     adjusted to have about 60nt. The cDNA vector was
                     circularized with E. coli DNA ligase after digestion of
                     EcoRI which site is also included in vector. An RNA strand
                     converted to a DNA strand by Okayama-Berg method. The
                     obtained cDNA vectors were used for transformation of
                     competent cells E. coli Top10F' by electroporation method.
                     The cDNA libraries constructed by this method are
                     full-length enriched cDNA library."
BASE COUNT       94 a     52 c     70 g     76 t
ORIGIN

  Query Match             70.0%;  Score 14;  DB 12;  Length 292;
  Best Local Similarity   100.0%;  Pred. No. 2.1e+03;
  Matches   14;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          5 CATCGATGCAGGGG 18
              ||||||||||||||
Db         68 CATCGATGCAGGGG 81


RESULT 11
BW097424/c
LOCUS       BW097424                306 bp    mRNA    linear   EST 24-OCT-2002
DEFINITION  BW097424 Nori Satoh unpublished cDNA library, tailbud embryo Ciona
            intestinalis cDNA clone rcitb058o09 3', mRNA sequence.
ACCESSION   BW097424
VERSION     BW097424.1  GI:24311237
KEYWORDS    EST.
SOURCE      Ciona intestinalis
  ORGANISM  Ciona intestinalis
            Eukaryota; Metazoa; Chordata; Urochordata; Ascidiacea; Enterogona;
            Phlebobranchia; Cionidae; Ciona.
REFERENCE   1  (bases 1 to 306)
  AUTHORS   Satou,Y., Shin-i,T., Kohara,Y. and Satoh,N.
  TITLE     Expressed genes in Ciona intestinalis (2002c)
  JOURNAL   Unpublished
COMMENT     Contact: Nori Satoh
            Department of Zoology
            Kyoto University
            Sakyo-ku, Kyoto, Kyoto 606-8502, Japan
            Tel: 81-75-753-4081
            Fax: 81-75-705-1113
            Email: satoh@ascidian.zool.kyoto-u.ac.jp.
FEATURES             Location/Qualifiers
     source          1. .306
                     /organism="Ciona intestinalis"
                     /mol_type="mRNA"
                     /db_xref="taxon:7719"
                     /clone="rcitb058o09"
                     /tissue_type="whole animal"
                     /dev_stage="tailbud embryo"
                     /clone_lib="Nori Satoh unpublished cDNA library, tailbud
                     embryo"
```

```
BASE COUNT       88 a     76 c     72 g     70 t
ORIGIN

  Query Match             70.0%;  Score 14;  DB 13;  Length 306;
  Best Local Similarity   100.0%;  Pred. No. 2.1e+03;
  Matches   14;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          6 ATCGATGCAGGGGG 19
              ||||||||||||||
Db        254 ATCGATGCAGGGGG 241


RESULT 12
AW415097
LOCUS       AW415097                329 bp    mRNA    linear   EST 09-JUL-2000
DEFINITION  49143 MARC 1PIG Sus scrofa cDNA 5', mRNA sequence.
ACCESSION   AW415097
VERSION     AW415097.1  GI:6942979
KEYWORDS    EST.
SOURCE      Sus scrofa (pig)
  ORGANISM  Sus scrofa
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
REFERENCE   1  (bases 1 to 329)
  AUTHORS   Fahrenkrug,S.C., Smith,T.P.L., Freking,B.A., Cho,J., White,J.,
            Vallet,J., Wise,T., Rohrer,G.A., Pertea,G., Sultana,R., Quackenbush
            ,J. and Keele,J.W.
  TITLE     Porcine gene discovery by normalized cDNA-library sequencing and
            EST cluster assembly
  JOURNAL   Mamm. Genome 13 (8), 475-478 (2002)
  MEDLINE   22213789
   PUBMED   12226715
COMMENT     Contact: Smith TPL
            USDA, ARS, US Meat Animal Research Center
            PO Box 166, Clay Center, NE 68933-0166, USA
            Tel: 402 762 4366
            Fax: 402 762 4390
            Email: smith@email.marc.usda.gov
            Single pass sequencing. Bases called and trimmed with phred
            v0.980904.e. Vector identified by cross_match with the -minscore 20
            and -minmatch 12 options.
            PCR PRimers
            FORWARD: AGGAAACAGCTATGACCAT
            BACKWARD: GTTTTCCCAGTCACGACG
            Plate: 23  row: N  column: 24
            Seq primer: ATTTAGGTGACACTATAG.
FEATURES             Location/Qualifiers
     source          1. .329
                     /organism="Sus scrofa"
                     /mol_type="mRNA"
                     /db_xref="taxon:9823"
                     /tissue_type="pooled"
                     /lab_host="DH10B"
                     /clone_lib="MARC 1PIG"
                     /note="Vector: pCMV SPORT6; Site_1: NotI; Site_2: SalI;
                     Library made from pooled tissue from day 11, 13, 15, 20,
                     and 30 embryos."
BASE COUNT       75 a     89 c     93 g     72 t
ORIGIN

  Query Match             70.0%;  Score 14;  DB 9;  Length 329;
  Best Local Similarity   100.0%;  Pred. No. 2.1e+03;
  Matches   14;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          4 GCATCGATGCAGGG 17
              ||||||||||||||
Db         82 GCATCGATGCAGGG 95


RESULT 13
BH019162/c
LOCUS       BH019162                352 bp    DNA     linear   GSS 25-MAY-2001
DEFINITION  L242k.d_HygT3.1 Leishmania major Friedlin Cosmid Genomic Library
            Leishmania major genomic clone L242k, genomic survey sequence.
ACCESSION   BH019162
VERSION     BH019162.1  GI:14197868
KEYWORDS    GSS.
SOURCE      Leishmania major
  ORGANISM  Leishmania major
            Eukaryota; Euglenozoa; Kinetoplastida; Trypanosomatidae;
            Leishmania.
REFERENCE   1  (bases 1 to 352)
  AUTHORS   Myler,P.J., Vogt,C., Cawthra,J., Klacking,M., Marty,A., Mack,J.,
            Munden,H., Nguyen,D., Robertson,L., Sisk,E., Fazelinia,G., Aggarwal
            ,G., Nelson,S., Seyler,A., Worthey,E. and Stuart,K.
  TITLE     Leishmania major Friedlin Cosmid End Sequences
  JOURNAL   Unpublished
COMMENT     Contact: Myler PJ
            Seattle Biomedical Research Institute
            4 Nickerson Street, Seatttle, WA 98109-1651, USA
            Tel: 206 284-8846
            Fax: 206 284-0313
            Email: mylerpj@sbri.org
            Seq primer: HygT3
            Class: cosmid ends.
FEATURES             Location/Qualifiers
     source          1. .352
                     /organism="Leishmania major"
                     /mol_type="genomic DNA"
                     /strain="Friedlin"
                     /db_xref="taxon:5664"
                     /clone="L242k"
                     /lab_host="E. coli ED8767"
                     /clone_lib="Leishmania major Friedlin Cosmid Genomic
                     Library"
                     /note="Vector: cLHYG; Site_1: BamHI; Genomic DNA from
                     Leishmania major Friedlin was partially digested with
                     Sau3AI, size selected, and ligated with BamHI-digested
                     cLHYG cosmid vector DNA.  9216 clones were picked and
                     arrayed.  Library construction is described in Ivens et
                     al., Genomics Research, 8:135-145 (1998).  The cLHYG
                     vector (Acc. No. CVU59231) is described in Ryan et al,
                     Gene, 131:145-150 (1993)"
BASE COUNT       57 a    132 c     99 g     64 t
ORIGIN

  Query Match             70.0%;  Score 14;  DB 28;  Length 352;
  Best Local Similarity   100.0%;  Pred. No. 2.1e+03;
  Matches   14;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          3 TGCATCGATGCAGG 16
              ||||||||||||||
Db         98 TGCATCGATGCAGG 85


RESULT 14
AA066330
LOCUS       AA066330                360 bp    mRNA    linear   EST 04-FEB-1997
DEFINITION  mm14e06.r1 Stratagene mouse diaphragm (#937303) Mus musculus cDNA
            clone IMAGE:521506 5' similar to gb:X03208 Mouse group 1 gene
            (MOUSE);, mRNA sequence.
ACCESSION   AA066330
VERSION     AA066330.1  GI:1563400
KEYWORDS    EST.
SOURCE      Mus musculus (house mouse)
  ORGANISM  Mus musculus
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
REFERENCE   1  (bases 1 to 360)
  AUTHORS   Marra,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dubuque,T.,
            Geisel,S., Kucaba,T., Lacy,M., Le,M., Martin,J., Morris,M.,
            Schellenberg,K., Steptoe,M., Tan,F., Underwood,K., Moore,B.,
            Theising,B., Wylie,T., Lennon,G., Soares,B., Wilson,R. and
            Waterston,R.
  TITLE     The WashU-HHMI Mouse EST Project
  JOURNAL   Unpublished
```

```
COMMENT     Contact: Marra M/Mouse EST Project
            WashU-HHMI Mouse EST Project
            Washington University School of MedicineP
            4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
            Tel: 314 286 1800
            Fax: 314 286 1810
            Email: mouseest@watson.wustl.edu
            This clone is available royalty-free through LLNL ; contact the
            IMAGE Consortium (info@image.llnl.gov) for further information.
            MGI:315354
            Trace considered overall poor quality
            Seq primer: -28m13 rev1 ET from Amersham
            High quality sequence stop: 1.
FEATURES             Location/Qualifiers
     source          1. .360
                     /organism="Mus musculus"
                     /mol_type="mRNA"
                     /db_xref="taxon:10090"
                     /clone="IMAGE:521506"
                     /tissue_type="diaphragm"
                     /dev_stage="adult"
                     /lab_host="SOLR (kanamycin resistant)"
                     /clone_lib="Stratagene mouse diaphragm (#937303)"
                     /note="Organ: diaphragm; Vector: pBluescript SK-; Site_1:
                     EcoRI; Site_2: XhoI; Cloned unidirectionally from mRNA
                     prepared from diaphragm muscle.  Primer: Oligo dT. Average
                     insert size: 1.5 kb. Uni-ZAP XR Vector; ~5' adaptor
                     sequence: 5' GAATTCGGCACGAG 3' ~3' adaptor sequence: 5'
                     CTCGAGTTTTTTTTTTTTTTTT 3'"
BASE COUNT       97 a     59 c    120 g     84 t
ORIGIN

  Query Match             70.0%;  Score 14;  DB 9;  Length 360;
  Best Local Similarity   100.0%;  Pred. No. 2.1e+03;
  Matches   14;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          7 TCGATGCAGGGGGG 20
              ||||||||||||||
Db         95 TCGATGCAGGGGGG 108


RESULT 15
CB391692
LOCUS       CB391692                363 bp    mRNA    linear   EST 15-MAY-2003
DEFINITION  OSTF156H5_1 AD-wrmcDNA Caenorhabditis elegans cDNA, mRNA sequence.
ACCESSION   CB391692
VERSION     CB391692.1  GI:30733402
KEYWORDS    EST.
SOURCE      Caenorhabditis elegans
  ORGANISM  Caenorhabditis elegans
            Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditoidea
            ; Rhabditidae; Peloderinae; Caenorhabditis.
REFERENCE   1  (bases 1 to 363)
  AUTHORS   Reboul,J., Vaglio,P., Rual,J.F., Lamesch,P., Martinez,M., Armstrong
            ,C.M., Li,S., Jacotot,L., Bertin,N., Janky,R., Moore,T., Hudson
            ,J.R., Hartley,J.L., Brasch,M.A., Vandenhaute,J., Boulton,S.,
            Endress,G.A., Jenna,S., Chevet,E., Papasotiropoulos,V., Tolias,P.P.
            , Ptacek,J., Snyder,M., Huang,R., Chance,M.R., Lee,H.,
            Doucette-Stamm,L., Hill,D.E. and Vidal,M.
  TITLE     C. elegans ORFeome version 1.1: experimental verification of the
            genome annotation and resource for proteome-scale protein
            expression
  JOURNAL   Nat. Genet.,  (2003) In press
COMMENT     Contact: Vidal M
            Marc Vidal Laboratory
            Dana Farber Cancer Institute
            1 Jimmy Fund Way Smith 858, BOSTON, MA 02115, USA
            Tel: 617 632 5180
            Fax: 617 632 5739
            Email: Marc_Vidal@dfci.harvard.edu
            Sequence tag of Gateway entry clones. The primers used were
            designed on the predicted protein encoding ORF. C. elegans ORFeome
            cloning project : Contact david_hill@dfci.harvard.edu or
            marc_vidal@dfci.harvard.edu
            POLYA=No.
FEATURES             Location/Qualifiers
     source          1. .363
                     /organism="Caenorhabditis elegans"
                     /mol_type="mRNA"
                     /strain="N2"
                     /db_xref="taxon:6239"
                     /sex="Hermaphrodite and male"
                     /tissue_type="whole animal"
                     /dev_stage="mixed stage"
                     /clone_lib="AD-wrmcDNA"
                     /note="The AD-wrmcDNA library was generated with poly(A)+
                     RNA isolated from both hermaphrodite and male N2 worms of
                     all larval stages, embryos, adults and dauers and the
                     subsequent generation of cDNAs by poly(A) priming. The
                     cDNAs were cloned into pPC86"
BASE COUNT      116 a     60 c     80 g    107 t
ORIGIN

  Query Match             70.0%;  Score 14;  DB 14;  Length 363;
  Best Local Similarity   100.0%;  Pred. No. 2.1e+03;
  Matches   14;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          6 ATCGATGCAGGGGG 19
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Db        175 ATCGATGCAGGGGG 188


Search completed: January 20, 2004, 20:01:22
Job time : 1226.76 secs
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GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: January 20, 2004, 16:34:44 ; Search time 706.471 Seconds
(without alignments)
1158.141 Million cell updates/sec

Title: US-10-068-160-54
Perfect score: 20
Sequence: 1 ggtgcatcgatgcaggggg 20

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 2888711 seqs, 20454813386 residues

Total number of hits satisfying chosen parameters: 5777422

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : GenEmbl:*
1: gb_ba:*
2: gb_htg:*
3: gb_in:*
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5: gb_ov:*
6: gb_pat:*
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30: em_htg_hum:*
31: em_htg_inv:*
32: em_htg_other:*
33: em_htg_mus:*
34: em_htg_pln:*
35: em_htg_rod:*
36: em_htg_mam:*
37: em_htg_vrt:*
38: em_sy:*
39: em_htgo_hum:*
40: em_htgo_mus:*
41: em_htgo_other:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	20	100.0	20	6	AX194432	AX194432 Sequence
2	20	100.0	20	6	AX194434	AX194434 Sequence
3	20	100.0	20	6	AX194437	AX194437 Sequence
4	20	100.0	20	6	AX194438	AX194438 Sequence
5	20	100.0	20	6	AX194443	AX194443 Sequence
6	20	100.0	20	6	AX194472	AX194472 Sequence
7	20	100.0	20	6	AX352198	AX352198 Sequence
8	20	100.0	20	6	AX352209	AX352209 Sequence
9	20	100.0	20	6	AX352242	AX352242 Sequence
10	20	100.0	20	6	AX465382	AX465382 Sequence
11	20	100.0	20	6	AX465384	AX465384 Sequence
12	20	100.0	20	6	AX465387	AX465387 Sequence
13	20	100.0	20	6	AX465388	AX465388 Sequence
14	20	100.0	20	6	AX465393	AX465393 Sequence
15	20	100.0	20	6	AX465422	AX465422 Sequence
16	20	100.0	22	6	AX352204	AX352204 Sequence
17	20	100.0	22	6	AX352248	AX352248 Sequence
18	20	100.0	28	6	AX352219	AX352219 Sequence
19	20	100.0	28	6	AX352231	AX352231 Sequence
20	20	100.0	29	6	AX352237	AX352237 Sequence
21	20	100.0	30	6	AX352225	AX352225 Sequence
22	20	100.0	30	6	AX352230	AX352230 Sequence
23	20	100.0	32	6	AX352167	AX352167 Sequence
24	19	95.0	19	6	AX194453	AX194453 Sequence
25	19	95.0	19	6	AX194473	AX194473 Sequence
26	19	95.0	19	6	AX465403	AX465403 Sequence
27	19	95.0	19	6	AX465423	AX465423 Sequence
28	18.4	92.0	20	6	AX194440	AX194440 Sequence
29	18.4	92.0	20	6	AX194481	AX194481 Sequence
30	18.4	92.0	20	6	AX194482	AX194482 Sequence
31	18.4	92.0	20	6	AX194500	AX194500 Sequence
32	18.4	92.0	20	6	AX194501	AX194501 Sequence
33	18.4	92.0	20	6	AX194504	AX194504 Sequence
34	18.4	92.0	20	6	AX194506	AX194506 Sequence
35	18.4	92.0	20	6	AX194507	AX194507 Sequence
36	18.4	92.0	20	6	AX352202	AX352202 Sequence
37	18.4	92.0	20	6	AX352203	AX352203 Sequence
38	18.4	92.0	20	6	AX352213	AX352213 Sequence
39	18.4	92.0	20	6	AX352214	AX352214 Sequence
40	18.4	92.0	20	6	AX352246	AX352246 Sequence
41	18.4	92.0	20	6	AX352247	AX352247 Sequence
42	18.4	92.0	20	6	AX465390	AX465390 Sequence
43	18.4	92.0	20	6	AX465431	AX465431 Sequence
44	18.4	92.0	20	6	AX465432	AX465432 Sequence
45	18.4	92.0	28	6	AX352223	AX352223 Sequence

ALIGNMENTS

RESULT 1
AX194432
LOCUS AX194432 20 bp DNA linear PAT 28-AUG-2001
DEFINITION Sequence 32 from Patent WO0151500.
ACCESSION AX194432
VERSION AX194432.1 GI:15385088
KEYWORDS .
SOURCE synthetic construct
ORGANISM synthetic construct
artificial sequences.
REFERENCE 1
AUTHORS Klinman,D., Ishii,K. and Verthelyi,D.
TITLE Oligodeoxynucleotide and its use to induce an immune response
JOURNAL Patent: WO 0151500-A 32 19-JUL-2001;
Secretary of the Department of Health and Human Services (US)

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FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic DNA"
BASE COUNT        3 a      3 c      11 g      3 t
ORIGIN

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  Best Local Similarity   100.0%;  Pred. No. 15;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 2
AX194434
LOCUS       AX194434                  20 bp    DNA     linear   PAT 28-AUG-2001
DEFINITION  Sequence 34 from Patent WO0151500.
ACCESSION   AX194434
VERSION     AX194434.1  GI:15385090
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Klinman,D., Ishii,K. and Verthelyi,D.
  TITLE     Oligodeoxynucleotide and its use to induce an immune response
  JOURNAL   Patent: WO 0151500-A 34 19-JUL-2001;
            Secretary of the Department of Health and Human Services (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic DNA"
BASE COUNT        3 a      3 c      11 g      3 t
ORIGIN

  Query Match           100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 15;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 3
AX194437
LOCUS       AX194437                  20 bp    DNA     linear   PAT 28-AUG-2001
DEFINITION  Sequence 37 from Patent WO0151500.
ACCESSION   AX194437
VERSION     AX194437.1  GI:15385093
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Klinman,D., Ishii,K. and Verthelyi,D.
  TITLE     Oligodeoxynucleotide and its use to induce an immune response
  JOURNAL   Patent: WO 0151500-A 37 19-JUL-2001;
            Secretary of the Department of Health and Human Services (US)
FEATURES             Location/Qualifiers
     source          1. .20
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                     /db_xref="taxon:32630"
                     /note="Synthetic DNA"
BASE COUNT        3 a      3 c      11 g      3 t
ORIGIN

  Query Match           100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 15;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 4
AX194438
LOCUS       AX194438                  20 bp    DNA     linear   PAT 28-AUG-2001
DEFINITION  Sequence 38 from Patent WO0151500.
ACCESSION   AX194438
VERSION     AX194438.1  GI:15385094
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Klinman,D., Ishii,K. and Verthelyi,D.
  TITLE     Oligodeoxynucleotide and its use to induce an immune response
  JOURNAL   Patent: WO 0151500-A 38 19-JUL-2001;
            Secretary of the Department of Health and Human Services (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic DNA"
BASE COUNT        3 a      3 c      11 g      3 t
ORIGIN

  Query Match           100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 15;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 5
AX194443
LOCUS       AX194443                  20 bp    DNA     linear   PAT 28-AUG-2001
DEFINITION  Sequence 43 from Patent WO0151500.
ACCESSION   AX194443
VERSION     AX194443.1  GI:15385099
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Klinman,D., Ishii,K. and Verthelyi,D.
  TITLE     Oligodeoxynucleotide and its use to induce an immune response
  JOURNAL   Patent: WO 0151500-A 43 19-JUL-2001;
            Secretary of the Department of Health and Human Services (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic DNA"
BASE COUNT        3 a      3 c      11 g      3 t
ORIGIN

  Query Match           100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 15;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
```

```
                    ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 6
AX194472
LOCUS       AX194472                  20 bp    DNA     linear   PAT 28-AUG-2001
DEFINITION  Sequence 72 from Patent WO0151500.
ACCESSION   AX194472
VERSION     AX194472.1  GI:15385128
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Klinman,D., Ishii,K. and Verthelyi,D.
  TITLE     Oligodeoxynucleotide and its use to induce an immune response
  JOURNAL   Patent: WO 0151500-A 72 19-JUL-2001;
            Secretary of the Department of Health and Human Services (US)
FEATURES             Location/Qualifiers
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                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic DNA"
BASE COUNT        3 a      3 c      11 g      3 t
ORIGIN

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  Best Local Similarity   100.0%;  Pred. No. 15;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 7
AX352198
LOCUS       AX352198                  20 bp    DNA     linear   PAT 06-FEB-2002
DEFINITION  Sequence 494 from Patent WO0193902.
ACCESSION   AX352198
VERSION     AX352198.1  GI:18617481
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Mond,J.J., Flora,M. and Klinman,D.M.
  TITLE     Immunostimulatory rna/dna hybrid molecules
  JOURNAL   Patent: WO 0193902-A 494 13-DEC-2001;
            Biosynexus Incorporated (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic HDR"
BASE COUNT        3 a      3 c      11 g      3 t
ORIGIN

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  Best Local Similarity   100.0%;  Pred. No. 15;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 8
AX352209
LOCUS       AX352209                  20 bp    DNA     linear   PAT 06-FEB-2002
DEFINITION  Sequence 505 from Patent WO0193902.
ACCESSION   AX352209
VERSION     AX352209.1  GI:18617492
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Mond,J.J., Flora,M. and Klinman,D.M.
  TITLE     Immunostimulatory rna/dna hybrid molecules
  JOURNAL   Patent: WO 0193902-A 505 13-DEC-2001;
            Biosynexus Incorporated (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic HDR"
BASE COUNT        3 a      3 c      11 g      3 t
ORIGIN

  Query Match             100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 15;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 9
AX352242
LOCUS       AX352242                  20 bp    DNA     linear   PAT 06-FEB-2002
DEFINITION  Sequence 538 from Patent WO0193902.
ACCESSION   AX352242
VERSION     AX352242.1  GI:18617525
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Mond,J.J., Flora,M. and Klinman,D.M.
  TITLE     Immunostimulatory rna/dna hybrid molecules
  JOURNAL   Patent: WO 0193902-A 538 13-DEC-2001;
            Biosynexus Incorporated (US)
FEATURES             Location/Qualifiers
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                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic HDR"
BASE COUNT        3 a      3 c      11 g      3 t
ORIGIN

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  Best Local Similarity   100.0%;  Pred. No. 15;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 10
AX465382
LOCUS       AX465382                  20 bp    DNA     linear   PAT 16-JUL-2002
DEFINITION  Sequence 50 from Patent WO0211761.
ACCESSION   AX465382
VERSION     AX465382.1  GI:21899745
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
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```
REFERENCE   1
  AUTHORS   Mond,J.J., Prince,G. and Klinman,D.M.
  TITLE     Vaccine against RSV
  JOURNAL   Patent: WO 0211761-A 50 14-FEB-2002;
            HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY
            MEDICINE (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic oligonucleotide"
BASE COUNT        3 a      3 c     11 g      3 t
ORIGIN

  Query Match             100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 15;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 11
AX465384
LOCUS       AX465384                  20 bp    DNA     linear   PAT 16-JUL-2002
DEFINITION  Sequence 52 from Patent WO0211761.
ACCESSION   AX465384
VERSION     AX465384.1  GI:21899747
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Mond,J.J., Prince,G. and Klinman,D.M.
  TITLE     Vaccine against RSV
  JOURNAL   Patent: WO 0211761-A 52 14-FEB-2002;
            HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY
            MEDICINE (US)
FEATURES             Location/Qualifiers
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                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic oligonucleotide"
BASE COUNT        3 a      3 c     11 g      3 t
ORIGIN

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  Best Local Similarity   100.0%;  Pred. No. 15;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 12
AX465387
LOCUS       AX465387                  20 bp    DNA     linear   PAT 16-JUL-2002
DEFINITION  Sequence 55 from Patent WO0211761.
ACCESSION   AX465387
VERSION     AX465387.1  GI:21899750
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Mond,J.J., Prince,G. and Klinman,D.M.
  TITLE     Vaccine against RSV
  JOURNAL   Patent: WO 0211761-A 55 14-FEB-2002;
            HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY
            MEDICINE (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic oligonucleotide"
BASE COUNT        3 a      3 c     11 g      3 t
ORIGIN

  Query Match             100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 15;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 13
AX465388
LOCUS       AX465388                  20 bp    DNA     linear   PAT 16-JUL-2002
DEFINITION  Sequence 56 from Patent WO0211761.
ACCESSION   AX465388
VERSION     AX465388.1  GI:21899751
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Mond,J.J., Prince,G. and Klinman,D.M.
  TITLE     Vaccine against RSV
  JOURNAL   Patent: WO 0211761-A 56 14-FEB-2002;
            HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY
            MEDICINE (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic oligonucleotide"
BASE COUNT        3 a      3 c     11 g      3 t
ORIGIN

  Query Match             100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 15;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 14
AX465393
LOCUS       AX465393                  20 bp    DNA     linear   PAT 16-JUL-2002
DEFINITION  Sequence 61 from Patent WO0211761.
ACCESSION   AX465393
VERSION     AX465393.1  GI:21899756
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Mond,J.J., Prince,G. and Klinman,D.M.
  TITLE     Vaccine against RSV
  JOURNAL   Patent: WO 0211761-A 61 14-FEB-2002;
            HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY
            MEDICINE (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
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                     /db_xref="taxon:32630"
                     /note="Synthetic oligonucleotide"
BASE COUNT        3 a      3 c     11 g      3 t
ORIGIN

  Query Match            100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity  100.0%;  Pred. No. 15;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 15
AX465422
LOCUS       AX465422                 20 bp    DNA     linear   PAT 16-JUL-2002
DEFINITION  Sequence 90 from Patent WO0211761.
ACCESSION   AX465422
VERSION     AX465422.1  GI:21899785
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Mond,J.J., Prince,G. and Klinman,D.M.
  TITLE     Vaccine against RSV
  JOURNAL   Patent: WO 0211761-A 90 14-FEB-2002;
            HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY
            MEDICINE (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic oligonucleotide"
BASE COUNT        3 a      3 c     11 g      3 t
ORIGIN

  Query Match            100.0%;  Score 20;  DB 6;  Length 20;
  Best Local Similarity  100.0%;  Pred. No. 15;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


Search completed: January 20, 2004, 17:14:58
Job time : 706.471 secs
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GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: January 20, 2004, 16:34:44 ; Search time 124.706 Seconds
(without alignments)
432.929 Million cell updates/sec

Title: US-10-068-160-54
Perfect score: 20
Sequence: 1 ggtgcatcgatgcaggggggg 20

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 2552756 seqs, 1349719017 residues

Total number of hits satisfying chosen parameters: 5105512

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	20	100.0	20	22	AAS09582	Immunoreactive CpG
2	20	100.0	20	22	AAS09584	Immunoreactive CpG
3	20	100.0	20	22	AAS09587	Immunoreactive CpG
4	20	100.0	20	22	AAS09588	Immunoreactive CpG
5	20	100.0	20	22	AAS09593	Immunoreactive CpG
6	20	100.0	20	22	AAS09622	Immunoreactive CpG
7	20	100.0	20	22	AAC80612	Immunogenic CpG ol
8	20	100.0	20	22	AAC80614	Immunogenic CpG ol
9	20	100.0	20	22	AAC80617	Immunogenic CpG ol
10	20	100.0	20	22	AAC80618	Immunogenic CpG ol
11	20	100.0	20	22	AAC80623	Immunogenic CpG ol
12	20	100.0	20	22	AAC80652	Immunogenic CpG ol
13	20	100.0	20	24	ABK46460	Immunostimulatory
14	20	100.0	20	24	ABK46462	Immunostimulatory
15	20	100.0	20	24	ABK46465	Immunostimulatory
16	20	100.0	20	24	ABK46466	Immunostimulatory
17	20	100.0	20	24	ABK46471	Immunostimulatory
18	20	100.0	20	24	ABK46500	Immunostimulatory
19	20	100.0	20	24	ABL35568	Immunostimulatory
20	20	100.0	20	24	ABL35579	Immunostimulatory
21	20	100.0	20	24	ABL35612	Immunostimulatory
22	20	100.0	22	24	ABL35574	Immunostimulatory
23	20	100.0	22	24	ABL35618	Immunostimulatory
24	20	100.0	28	24	ABL35589	Immunostimulatory
25	20	100.0	28	24	ABL35601	Immunostimulatory
26	20	100.0	29	24	ABL35607	Immunostimulatory
27	20	100.0	30	24	ABL35595	Immunostimulatory
28	20	100.0	30	24	ABL35600	Immunostimulatory
29	20	100.0	32	24	ABL35537	Immunostimulatory
30	19	95.0	19	22	AAS09603	Immunoreactive CpG
31	19	95.0	19	22	AAS09623	Immunoreactive CpG
32	19	95.0	19	22	AAC80633	Immunogenic CpG ol
33	19	95.0	19	22	AAC80653	Immunogenic CpG ol
34	19	95.0	19	24	ABK46481	Immunostimulatory
35	19	95.0	19	24	ABK46501	Immunostimulatory
36	18.4	92.0	20	22	AAS09590	Immunoreactive CpG
37	18.4	92.0	20	22	AAS09631	Immunoreactive CpG
38	18.4	92.0	20	22	AAS09632	Immunoreactive CpG
39	18.4	92.0	20	22	AAS09650	Immunoreactive CpG
40	18.4	92.0	20	22	AAS09651	Immunoreactive CpG
41	18.4	92.0	20	22	AAS09654	Immunoreactive CpG
42	18.4	92.0	20	22	AAS09656	Immunoreactive CpG
43	18.4	92.0	20	22	AAS09657	Immunoreactive CpG
44	18.4	92.0	20	22	AAC80620	Immunogenic CpG ol
45	18.4	92.0	20	22	AAC80661	Immunogenic CpG ol

ALIGNMENTS

RESULT 1
AAS09582
ID AAS09582 standard; DNA; 20 BP.
XX
AC AAS09582;
XX
DT 26-SEP-2001 (first entry)
XX
DE Immunoreactive CpG sequence-containing oligonucleotide #32.
XX
KW CpG sequence; immune response; non-B cell activation; interferon gamma;
KW IFN-gamma; humoral; antibody production; interleukin-6 production;
KW therapeutic; allergy; asthma; cancer; autoimmune disorder; infection;
KW bio-warfare; vaccine; antisense therapy; eczema; allergic rhinitis;
KW coryza; hay fever; urticaria; hives; food allergy; atopic condition;
KW hepatitis; human immunodeficiency virus; HIV; malaria; Francisella;
KW lupus erythematosus; rheumatoid arthritis; multiple sclerosis;
KW schistosomiasis; tuberculosis; acquired immunodeficiency syndrome; AIDS;
KW Leishmania; Ebola; Anthrax; Listeria; ss.
XX
OS Synthetic.
XX
PN WO200151500-A1.
XX
PD 19-JUL-2001.
XX
PF 12-JAN-2001; 2001WO-US01122.
XX
PR 14-JAN-2000; 2000US-0176115.
XX
PA (USSH) US DEPT HEALTH & HUMAN SERVICES.

XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-442129/47.
XX
PT Oligodeoxynucleotides for inducing an immune response to treat and
PT prevent an allergic reaction, cancer, an autoimmune disorder and
PT symptoms resulting from exposure to bio-warfare agents, comprise
PT multiple CpG sequences -
XX
PS Claim 5; Page 32; 48pp; English.
XX
CC AAS09551-AAS09662 represent oligodeoxynucleotides (ODN) of at least 10
CC nucleotides comprising multiple CpG sequences, where one of the CpG
CC sequences is different from another of the multiple CpG sequences.
CC The ODN are useful for inducing an immune response, preferably a cell-
CC mediated immune response, involving non-B cell activation, interferon
CC gamma (IFN-gamma) production or a humoral immune response involving B
CC cell activation, antibody and interleukin-6 production in a host, for
CC treating, preventing or ameliorating an allergic reaction, e.g. asthma,
CC cancer, e.g. solid tumour cancer, a disease associated with the immune
CC system e.g. autoimmune disorder or an immune system deficiency, infection
CC or a symptom resulting from exposure to bio-warfare agent in a human. The
CC induction of immune response improves the efficacy of a vaccine and is
CC used in antisense therapy. The ODN are useful for treating, preventing or
CC ameliorating allergic reactions, including eczema, allergic rhinitis or
CC coryza, hay fever, bronchial asthma, urticaria (hives), food allergies
CC and other atopic conditions, for improving the efficacy of vaccines
CC against hepatitis A, B and C, human immunodeficiency virus (HIV) and
CC malaria, for treating immune system deficiencies, e.g. lupus
CC erythematosus and autoimmune diseases such as rheumatoid arthritis and
CC multiple sclerosis, infections including Francisella, schistosomiasis,
CC tuberculosis, acquired immunodeficiency syndrome (AIDS), Leishmania and
CC symptoms resulting from exposure of bio-warfare agent, including Ebola,
CC Anthrax and Listeria.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

Query Match 100.0%; Score 20; DB 22; Length 20;
Best Local Similarity 100.0%; Pred. No. 2;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 2
AAS09584
ID AAS09584 standard; DNA; 20 BP.
XX
AC AAS09584;
XX
DT 26-SEP-2001 (first entry)
XX
DE Immunoreactive CpG sequence-containing oligonucleotide #34.
XX
KW CpG sequence; immune response; non-B cell activation; interferon gamma;
KW IFN-gamma; humoral; antibody production; interleukin-6 production;
KW therapeutic; allergy; asthma; cancer; autoimmune disorder; infection;
KW bio-warfare; vaccine; antisense therapy; eczema; allergic rhinitis;
KW coryza; hay fever; urticaria; hives; food allergy; atopic condition;
KW hepatitis; human immunodeficiency virus; HIV; malaria; Francisella;
KW lupus erythematosus; rheumatoid arthritis; multiple sclerosis;
KW schistosomiasis; tuberculosis; acquired immunodeficiency syndrome; AIDS;
KW Leishmania; Ebola; Anthrax; Listeria; ss.
XX
OS Synthetic.
XX
PN WO200151500-A1.
XX
PD 19-JUL-2001.
XX
PF 12-JAN-2001; 2001WO-US01122.
XX
PR 14-JAN-2000; 2000US-0176115.
XX
PA (USSH) US DEPT HEALTH & HUMAN SERVICES.
XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-442129/47.
XX
PT Oligodeoxynucleotides for inducing an immune response to treat and
PT prevent an allergic reaction, cancer, an autoimmune disorder and
PT symptoms resulting from exposure to bio-warfare agents, comprise
PT multiple CpG sequences -
XX
PS Claim 5; Page 32; 48pp; English.
XX
CC AAS09551-AAS09662 represent oligodeoxynucleotides (ODN) of at least 10
CC nucleotides comprising multiple CpG sequences, where one of the CpG
CC sequences is different from another of the multiple CpG sequences.
CC The ODN are useful for inducing an immune response, preferably a cell-
CC mediated immune response, involving non-B cell activation, interferon
CC gamma (IFN-gamma) production or a humoral immune response involving B
CC cell activation, antibody and interleukin-6 production in a host, for
CC treating, preventing or ameliorating an allergic reaction, e.g. asthma,
CC cancer, e.g. solid tumour cancer, a disease associated with the immune
CC system e.g. autoimmune disorder or an immune system deficiency, infection
CC or a symptom resulting from exposure to bio-warfare agent in a human. The
CC induction of immune response improves the efficacy of a vaccine and is
CC used in antisense therapy. The ODN are useful for treating, preventing or
CC ameliorating allergic reactions, including eczema, allergic rhinitis or
CC coryza, hay fever, bronchial asthma, urticaria (hives), food allergies
CC and other atopic conditions, for improving the efficacy of vaccines
CC against hepatitis A, B and C, human immunodeficiency virus (HIV) and
CC malaria, for treating immune system deficiencies, e.g. lupus
CC erythematosus and autoimmune diseases such as rheumatoid arthritis and
CC multiple sclerosis, infections including Francisella, schistosomiasis,
CC tuberculosis, acquired immunodeficiency syndrome (AIDS), Leishmania and
CC symptoms resulting from exposure of bio-warfare agent, including Ebola,
CC Anthrax and Listeria.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

Query Match 100.0%; Score 20; DB 22; Length 20;
Best Local Similarity 100.0%; Pred. No. 2;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 3
AAS09587
ID AAS09587 standard; DNA; 20 BP.
XX
AC AAS09587;
XX
DT 26-SEP-2001 (first entry)
XX
DE Immunoreactive CpG sequence-containing oligonucleotide #37.
XX
KW CpG sequence; immune response; non-B cell activation; interferon gamma;
KW IFN-gamma; humoral; antibody production; interleukin-6 production;
KW therapeutic; allergy; asthma; cancer; autoimmune disorder; infection;
KW bio-warfare; vaccine; antisense therapy; eczema; allergic rhinitis;
KW coryza; hay fever; urticaria; hives; food allergy; atopic condition;
KW hepatitis; human immunodeficiency virus; HIV; malaria; Francisella;
KW lupus erythematosus; rheumatoid arthritis; multiple sclerosis;
KW schistosomiasis; tuberculosis; acquired immunodeficiency syndrome; AIDS;
KW Leishmania; Ebola; Anthrax; Listeria; ss.
XX
OS Synthetic.

XX
PN WO200151500-A1.
XX
PD 19-JUL-2001.
XX
PF 12-JAN-2001; 2001WO-US01122.
XX
PR 14-JAN-2000; 2000US-0176115.
XX
PA (USSH) US DEPT HEALTH & HUMAN SERVICES.
XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-442129/47.
XX
PT Oligodeoxynucleotides for inducing an immune response to treat and
PT prevent an allergic reaction, cancer, an autoimmune disorder and
PT symptoms resulting from exposure to bio-warfare agents, comprise
PT multiple CpG sequences -
XX
PS Claim 5; Page 33; 48pp; English.
XX
CC AAS09551-AAS09662 represent oligodeoxynucleotides (ODN) of at least 10
CC nucleotides comprising multiple CpG sequences, where one of the CpG
CC sequences is different from another of the multiple CpG sequences.
CC The ODN are useful for inducing an immune response, preferably a cell-
CC mediated immune response, involving non-B cell activation, interferon
CC gamma (IFN-gamma) production or a humoral immune response involving B
CC cell activation, antibody and interleukin-6 production in a host, for
CC treating, preventing or ameliorating an allergic reaction, e.g. asthma,
CC cancer, e.g. solid tumour cancer, a disease associated with the immune
CC system e.g. autoimmune disorder or an immune system deficiency, infection
CC or a symptom resulting from exposure to bio-warfare agent in a human. The
CC induction of immune response improves the efficacy of a vaccine and is
CC used in antisense therapy. The ODN are useful for treating, preventing or
CC ameliorating allergic reactions, including eczema, allergic rhinitis or
CC coryza, hay fever, bronchial asthma, urticaria (hives), food allergies
CC and other atopic conditions, for improving the efficacy of vaccines
CC against hepatitis A, B and C, human immunodeficiency virus (HIV) and
CC malaria, for treating immune system deficiencies, e.g. lupus
CC erythematosus and autoimmune diseases such as rheumatoid arthritis and
CC multiple sclerosis, infections including Francisella, schistosomiasis,
CC tuberculosis, acquired immunodeficiency syndrome (AIDS), Leishmania and
CC symptoms resulting from exposure of bio-warfare agent, including Ebola,
CC Anthrax and Listeria.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

Query Match 100.0%; Score 20; DB 22; Length 20;
Best Local Similarity 100.0%; Pred. No. 2;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 4
AAS09588
ID AAS09588 standard; DNA; 20 BP.
XX
AC AAS09588;
XX
DT 26-SEP-2001 (first entry)
XX
DE Immunoreactive CpG sequence-containing oligonucleotide #38.
XX
KW CpG sequence; immune response; non-B cell activation; interferon gamma;
KW IFN-gamma; humoral; antibody production; interleukin-6 production;
KW therapeutic; allergy; asthma; cancer; autoimmune disorder; infection;
KW bio-warfare; vaccine; antisense therapy; eczema; allergic rhinitis;
KW coryza; hay fever; urticaria; hives; food allergy; atopic condition;
KW hepatitis; human immunodeficiency virus; HIV; malaria; Francisella;
KW lupus erythematosus; rheumatoid arthritis; multiple sclerosis;
KW schistosomiasis; tuberculosis; acquired immunodeficiency syndrome; AIDS;
KW Leishmania; Ebola; Anthrax; Listeria; ss.
XX
OS Synthetic.
XX
PN WO200151500-A1.
XX
PD 19-JUL-2001.
XX
PF 12-JAN-2001; 2001WO-US01122.
XX
PR 14-JAN-2000; 2000US-0176115.
XX
PA (USSH) US DEPT HEALTH & HUMAN SERVICES.
XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-442129/47.
XX
PT Oligodeoxynucleotides for inducing an immune response to treat and
PT prevent an allergic reaction, cancer, an autoimmune disorder and
PT symptoms resulting from exposure to bio-warfare agents, comprise
PT multiple CpG sequences -
XX
PS Claim 5; Page 33; 48pp; English.
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CC AAS09551-AAS09662 represent oligodeoxynucleotides (ODN) of at least 10
CC nucleotides comprising multiple CpG sequences, where one of the CpG
CC sequences is different from another of the multiple CpG sequences.
CC The ODN are useful for inducing an immune response, preferably a cell-
CC mediated immune response, involving non-B cell activation, interferon
CC gamma (IFN-gamma) production or a humoral immune response involving B
CC cell activation, antibody and interleukin-6 production in a host, for
CC treating, preventing or ameliorating an allergic reaction, e.g. asthma,
CC cancer, e.g. solid tumour cancer, a disease associated with the immune
CC system e.g. autoimmune disorder or an immune system deficiency, infection
CC or a symptom resulting from exposure to bio-warfare agent in a human. The
CC induction of immune response improves the efficacy of a vaccine and is
CC used in antisense therapy. The ODN are useful for treating, preventing or
CC ameliorating allergic reactions, including eczema, allergic rhinitis or
CC coryza, hay fever, bronchial asthma, urticaria (hives), food allergies
CC and other atopic conditions, for improving the efficacy of vaccines
CC against hepatitis A, B and C, human immunodeficiency virus (HIV) and
CC malaria, for treating immune system deficiencies, e.g. lupus
CC erythematosus and autoimmune diseases such as rheumatoid arthritis and
CC multiple sclerosis, infections including Francisella, schistosomiasis,
CC tuberculosis, acquired immunodeficiency syndrome (AIDS), Leishmania and
CC symptoms resulting from exposure of bio-warfare agent, including Ebola,
CC Anthrax and Listeria.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

Query Match 100.0%; Score 20; DB 22; Length 20;
Best Local Similarity 100.0%; Pred. No. 2;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 5
AAS09593
ID AAS09593 standard; DNA; 20 BP.
XX
AC AAS09593;
XX
DT 26-SEP-2001 (first entry)
XX
DE Immunoreactive CpG sequence-containing oligonucleotide #43.
XX
KW CpG sequence; immune response; non-B cell activation; interferon gamma;

KW IFN-gamma; humoral; antibody production; interleukin-6 production;
KW therapeutic; allergy; asthma; cancer; autoimmune disorder; infection;
KW bio-warfare; vaccine; antisense therapy; eczema; allergic rhinitis;
KW coryza; hay fever; urticaria; hives; food allergy; atopic condition;
KW hepatitis; human immunodeficiency virus; HIV; malaria; Francisella;
KW lupus erythematosus; rheumatoid arthritis; multiple sclerosis;
KW schistosomiasis; tuberculosis; acquired immunodeficiency syndrome; AIDS;
KW Leishmania; Ebola; Anthrax; Listeria; ss.
XX
OS Synthetic.
XX
PN WO200151500-A1.
XX
PD 19-JUL-2001.
XX
PF 12-JAN-2001; 2001WO-US01122.
XX
PR 14-JAN-2000; 2000US-0176115.
XX
PA (USSH) US DEPT HEALTH & HUMAN SERVICES.
XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-442129/47.
XX
PT Oligodeoxynucleotides for inducing an immune response to treat and
PT prevent an allergic reaction, cancer, an autoimmune disorder and
PT symptoms resulting from exposure to bio-warfare agents, comprise
PT multiple CpG sequences -
XX
PS Claim 5; Page 34; 48pp; English.
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CC sequences is different from another of the multiple CpG sequences.
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CC mediated immune response, involving non-B cell activation, interferon
CC gamma (IFN-gamma) production or a humoral immune response involving B
CC cell activation, antibody and interleukin-6 production in a host, for
CC treating, preventing or ameliorating an allergic reaction, e.g. asthma,
CC cancer, e.g. solid tumour cancer, a disease associated with the immune
CC system e.g. autoimmune disorder or an immune system deficiency, infection
CC or a symptom resulting from exposure to bio-warfare agent in a human. The
CC induction of immune response improves the efficacy of a vaccine and is
CC used in antisense therapy. The ODN are useful for treating, preventing or
CC ameliorating allergic reactions, including eczema, allergic rhinitis or
CC coryza, hay fever, bronchial asthma, urticaria (hives), food allergies
CC and other atopic conditions, for improving the efficacy of vaccines
CC against hepatitis A, B and C, human immunodeficiency virus (HIV) and
CC malaria, for treating immune system deficiencies, e.g. lupus
CC erythematosus and autoimmune diseases such as rheumatoid arthritis and
CC multiple sclerosis, infections including Francisella, schistosomiasis,
CC tuberculosis, acquired immunodeficiency syndrome (AIDS), Leishmania and
CC symptoms resulting from exposure of bio-warfare agent, including Ebola,
CC Anthrax and Listeria.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

Query Match 100.0%; Score 20; DB 22; Length 20;
Best Local Similarity 100.0%; Pred. No. 2;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 6
AAS09622
ID AAS09622 standard; DNA; 20 BP.
XX
AC AAS09622;
XX
DT 26-SEP-2001 (first entry)
XX
DE Immunoreactive CpG sequence-containing oligonucleotide #72.
XX
KW CpG sequence; immune response; non-B cell activation; interferon gamma;
KW IFN-gamma; humoral; antibody production; interleukin-6 production;
KW therapeutic; allergy; asthma; cancer; autoimmune disorder; infection;
KW bio-warfare; vaccine; antisense therapy; eczema; allergic rhinitis;
KW coryza; hay fever; urticaria; hives; food allergy; atopic condition;
KW hepatitis; human immunodeficiency virus; HIV; malaria; Francisella;
KW lupus erythematosus; rheumatoid arthritis; multiple sclerosis;
KW schistosomiasis; tuberculosis; acquired immunodeficiency syndrome; AIDS;
KW Leishmania; Ebola; Anthrax; Listeria; ss.
XX
OS Synthetic.
XX
PN WO200151500-A1.
XX
PD 19-JUL-2001.
XX
PF 12-JAN-2001; 2001WO-US01122.
XX
PR 14-JAN-2000; 2000US-0176115.
XX
PA (USSH) US DEPT HEALTH & HUMAN SERVICES.
XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-442129/47.
XX
PT Oligodeoxynucleotides for inducing an immune response to treat and
PT prevent an allergic reaction, cancer, an autoimmune disorder and
PT symptoms resulting from exposure to bio-warfare agents, comprise
PT multiple CpG sequences -
XX
PS Claim 5; Page 39; 48pp; English.
XX
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CC The ODN are useful for inducing an immune response, preferably a cell-
CC mediated immune response, involving non-B cell activation, interferon
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CC cell activation, antibody and interleukin-6 production in a host, for
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CC cancer, e.g. solid tumour cancer, a disease associated with the immune
CC system e.g. autoimmune disorder or an immune system deficiency, infection
CC or a symptom resulting from exposure to bio-warfare agent in a human. The
CC induction of immune response improves the efficacy of a vaccine and is
CC used in antisense therapy. The ODN are useful for treating, preventing or
CC ameliorating allergic reactions, including eczema, allergic rhinitis or
CC coryza, hay fever, bronchial asthma, urticaria (hives), food allergies
CC and other atopic conditions, for improving the efficacy of vaccines
CC against hepatitis A, B and C, human immunodeficiency virus (HIV) and
CC malaria, for treating immune system deficiencies, e.g. lupus
CC erythematosus and autoimmune diseases such as rheumatoid arthritis and
CC multiple sclerosis, infections including Francisella, schistosomiasis,
CC tuberculosis, acquired immunodeficiency syndrome (AIDS), Leishmania and
CC symptoms resulting from exposure of bio-warfare agent, including Ebola,
CC Anthrax and Listeria.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

Query Match 100.0%; Score 20; DB 22; Length 20;
Best Local Similarity 100.0%; Pred. No. 2;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 7

```
AAC80612
ID   AAC80612 standard; DNA; 20 BP.
XX
AC   AAC80612;
XX
DT   14-FEB-2001  (first entry)
XX
DE   Immunogenic CpG oligodeoxynucleotide, SEQ ID NO:32.
XX
KW   CpG oligodeoxynucleotide; unmethylated; antigen-presenting cell;
KW   immunogenic; cytokine release; natural killer cell; NK cell activation;
KW   cell-mediated immune response; T-cell response; humoral response;
KW   B-cell response; antibody production; immune response induction;
KW   vaccine; allergy; asthma; infection; bacterial; viral; fungal; protozoal;
KW   parasitic; tuberculosis; AIDS; autoimmune disease; lupus erythematosus;
KW   rheumatoid arthritis; multiple sclerosis; solid tumour; cancer;
KW   immune deficiency; biological warfare agent; cytostatic; antiarthritic;
KW   antimicrobial; antiallergic; protozoacide; tuberculostatic;
KW   antiasthmatic; dermatological; phosphorothioate; ss.
XX
OS   Synthetic.
XX
PN   WO200061151-A2.
XX
PD   19-OCT-2000.
XX
PF   12-APR-2000; 2000WO-US09839.
XX
PR   12-APR-1999;   99US-0128898.
XX
PA   (KLIN/) KLINMAN D.
PA   (ISHI/) ISHII K.
PA   (VERT/) VERTHELYI D.
XX
PI   Klinman D,  Ishii K,  Verthelyi D;
XX
DR   WPI; 2001-006880/01.
XX
PT   Novel oligonucleotides useful for the prevention and treatment of
PT   allergies, cancer, and autoimmune disorders and for ameliorating
PT   symptoms resulting from exposure to a bio-warfare agent  -
XX
PS   Claim 4; Page 29; 46pp; English.
XX
CC   The invention relates to novel immunogenic CpG oligodeoxynucleotides
CC   (AAC80581-C80723). The oligonucleotide are at least 10 bases long
CC   and comprise one of the generic sequences 5'-NNNT-CpG-WNNN-3' or
CC   5'-RY-CpG-RY-3'. The central CpG motif is unmethylated, and the
CC   oligonucleotides optionally have phosphorothioate linkages which make
CC   them more resistant to degradation. The invention also relates to an
CC   oligonucleotide delivery complex comprising an oligonucleotide of the
CC   invention and a targetting agent, and a pharmaceutical composition
CC   comprising the oligonucleotide delivery complex. The oligonucleotides
CC   are able to induce either a cell-mediated (T-cell) response or a humoral
CC   (B-cell, antibody) response, with oligonucleotides of the sequence
CC   5'-RY-CpG-RY-3' being able to induce a cell-mediated response, and those
CC   of the sequence 5'-NNNT-CpG-WNNN-3' being able to induce a humoral
CC   response. It is thought that after administration, the oligonucleotide
CC   acts on antigen-presenting cells (e.g., macrophages and dendritic
CC   cells), which then release cytokines, leading to activation of natural
CC   killer (NK) cells. A cell-mediated or humoral response can then occur by
CC   activation of T- or B-cells. The induction of an immune response is
CC   useful for treating, preventing or ameliorating an allergic reaction
CC   (preferably asthma), or an infection, where an immunogenic CpG
CC   oligonucleotide is administered either alone or in combination with an
CC   anti-allergenic agent or anti-infectious agent. The allergic conditions
CC   which may be treated include eczema, allergic rhinitis, hayfever,
CC   urticaria, food allergies and other atopic conditions, and the
CC   infections which may be treated include viral, bacterial, fungal and
CC   protozoal infections such as tuberculosis, AIDS, leishmania and
CC   schistosomiasis. Immune response induction may also be used in the
CC   treatment of an autoimmune disorder (e.g., lupus erythematosus,
CC   rheumatoid arthritis and multiple sclerosis), a disease associated with
CC   immune system deficiency, and symptoms resulting from exposure to an
CC   agent of biological warfare. An immunogenic CpG oligonucleotide, either
CC   alone or in combination with an anti-cancer agent, is useful for treating
CC   solid tumour cancer. The induction of an immune response is used in
CC   antisense therapy and to improve the efficacy of a vaccine. The
CC   oligonucleotide is preferably administered to lymphocytes ex vivo,
CC   producing activated lymphocytes which are then administered to the host.
CC   The present sequence represents an immunogenic CpG oligodeoxynucleotide
CC   of the invention.
XX
SQ   Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

  Query Match             100.0%;  Score 20;  DB 22;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 2;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 8
AAC80614
ID   AAC80614 standard; DNA; 20 BP.
XX
AC   AAC80614;
XX
DT   14-FEB-2001  (first entry)
XX
DE   Immunogenic CpG oligodeoxynucleotide, SEQ ID NO:34.
XX
KW   CpG oligodeoxynucleotide; unmethylated; antigen-presenting cell;
KW   immunogenic; cytokine release; natural killer cell; NK cell activation;
KW   cell-mediated immune response; T-cell response; humoral response;
KW   B-cell response; antibody production; immune response induction;
KW   vaccine; allergy; asthma; infection; bacterial; viral; fungal; protozoal;
KW   parasitic; tuberculosis; AIDS; autoimmune disease; lupus erythematosus;
KW   rheumatoid arthritis; multiple sclerosis; solid tumour; cancer;
KW   immune deficiency; biological warfare agent; cytostatic; antiarthritic;
KW   antimicrobial; antiallergic; protozoacide; tuberculostatic;
KW   antiasthmatic; dermatological; phosphorothioate; ss.
XX
OS   Synthetic.
XX
PN   WO200061151-A2.
XX
PD   19-OCT-2000.
XX
PF   12-APR-2000; 2000WO-US09839.
XX
PR   12-APR-1999;   99US-0128898.
XX
PA   (KLIN/) KLINMAN D.
PA   (ISHI/) ISHII K.
PA   (VERT/) VERTHELYI D.
XX
PI   Klinman D,  Ishii K,  Verthelyi D;
XX
DR   WPI; 2001-006880/01.
XX
PT   Novel oligonucleotides useful for the prevention and treatment of
PT   allergies, cancer, and autoimmune disorders and for ameliorating
PT   symptoms resulting from exposure to a bio-warfare agent  -
XX
PS   Claim 4; Page 29; 46pp; English.
XX
CC   The invention relates to novel immunogenic CpG oligodeoxynucleotides
CC   (AAC80581-C80723). The oligonucleotide are at least 10 bases long
CC   and comprise one of the generic sequences 5'-NNNT-CpG-WNNN-3' or
CC   5'-RY-CpG-RY-3'. The central CpG motif is unmethylated, and the
CC   oligonucleotides optionally have phosphorothioate linkages which make
CC   them more resistant to degradation. The invention also relates to an
CC   oligonucleotide delivery complex comprising an oligonucleotide of the
```

CC invention and a targetting agent, and a pharmaceutical composition
CC comprising the oligonucleotide delivery complex. The oligonucleotides
CC are able to induce either a cell-mediated (T-cell) response or a humoral
CC (B-cell, antibody) response, with oligonucleotides of the sequence
CC 5'-RY-CpG-RY-3' being able to induce a cell-mediated response, and those
CC of the sequence 5'-NNNT-CpG-WNNN-3' being able to induce a humoral
CC response. It is thought that after administration, the oligonucleotide
CC acts on antigen-presenting cells (e.g., macrophages and dendritic
CC cells), which then release cytokines, leading to activation of natural
CC killer (NK) cells. A cell-mediated or humoral response can then occur by
CC activation of T- or B-cells. The induction of an immune response is
CC useful for treating, preventing or ameliorating an allergic reaction
CC (preferably asthma), or an infection, where an immunogenic CpG
CC oligonucleotide is administered either alone or in combination with an
CC anti-allergenic agent or anti-infectious agent. The allergic conditions
CC which may be treated include eczema, allergic rhinitis, hayfever,
CC urticaria, food allergies and other atopic conditions, and the
CC infections which may be treated include viral, bacterial, fungal and
CC protozoal infections such as tuberculosis, AIDS, leishmania and
CC schistosomiasis. Immune response induction may also be used in the
CC treatment of an autoimmune disorder (e.g., lupus erythematosus,
CC rheumatoid arthritis and multiple sclerosis), a disease associated with
CC immune system deficiency, and symptoms resulting from exposure to an
CC agent of biological warfare. An immunogenic CpG oligonucleotide, either
CC alone or in combination with an anti-cancer agent, is useful for treating
CC solid tumour cancer. The induction of an immune response is used in
CC antisense therapy and to improve the efficacy of a vaccine. The
CC oligonucleotide is preferably administered to lymphocytes ex vivo,
CC producing activated lymphocytes which are then administered to the host.
CC The present sequence represents an immunogenic CpG oligodeoxynucleotide
CC of the invention.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

Query Match 100.0%; Score 20; DB 22; Length 20;
Best Local Similarity 100.0%; Pred. No. 2;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 9
AAC80617
ID AAC80617 standard; DNA; 20 BP.
XX
AC AAC80617;
XX
DT 14-FEB-2001 (first entry)
XX
DE Immunogenic CpG oligodeoxynucleotide, SEQ ID NO:37.
XX
KW CpG oligodeoxynucleotide; unmethylated; antigen-presenting cell;
KW immunogenic; cytokine release; natural killer cell; NK cell activation;
KW cell-mediated immune response; T-cell response; humoral response;
KW B-cell response; antibody production; immune response induction;
KW vaccine; allergy; asthma; infection; bacterial; viral; fungal; protozoal;
KW parasitic; tuberculosis; AIDS; autoimmune disease; lupus erythematosus;
KW rheumatoid arthritis; multiple sclerosis; solid tumour; cancer;
KW immune deficiency; biological warfare agent; cytostatic; antiarthritic;
KW antimicrobial; antiallergic; protozoacide; tuberculostatic;
KW antiasthmatic; dermatological; phosphorothioate; ss.
XX
OS Synthetic.
XX
PN WO200061151-A2.
XX
PD 19-OCT-2000.
XX
PF 12-APR-2000; 2000WO-US09839.
XX
PR 12-APR-1999; 99US-0128898.
XX
PA (KLIN/) KLINMAN D.
PA (ISHI/) ISHII K.
PA (VERT/) VERTHELYI D.
XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-006880/01.
XX
PT Novel oligonucleotides useful for the prevention and treatment of
PT allergies, cancer, and autoimmune disorders and for ameliorating
PT symptoms resulting from exposure to a bio-warfare agent -
XX
PS Claim 4; Page 29; 46pp; English.
XX
CC The invention relates to novel immunogenic CpG oligodeoxynucleotides
CC (AAC80581-C80723). The oligonucleotide are at least 10 bases long
CC and comprise one of the generic sequences 5'-NNNT-CpG-WNNN-3' or
CC 5'-RY-CpG-RY-3'. The central CpG motif is unmethylated, and the
CC oligonucleotides optionally have phosphorothioate linkages which make
CC them more resistant to degradation. The invention also relates to an
CC oligonucleotide delivery complex comprising an oligonucleotide of the
CC invention and a targetting agent, and a pharmaceutical composition
CC comprising the oligonucleotide delivery complex. The oligonucleotides
CC are able to induce either a cell-mediated (T-cell) response or a humoral
CC (B-cell, antibody) response, with oligonucleotides of the sequence
CC 5'-RY-CpG-RY-3' being able to induce a cell-mediated response, and those
CC of the sequence 5'-NNNT-CpG-WNNN-3' being able to induce a humoral
CC response. It is thought that after administration, the oligonucleotide
CC acts on antigen-presenting cells (e.g., macrophages and dendritic
CC cells), which then release cytokines, leading to activation of natural
CC killer (NK) cells. A cell-mediated or humoral response can then occur by
CC activation of T- or B-cells. The induction of an immune response is
CC useful for treating, preventing or ameliorating an allergic reaction
CC (preferably asthma), or an infection, where an immunogenic CpG
CC oligonucleotide is administered either alone or in combination with an
CC anti-allergenic agent or anti-infectious agent. The allergic conditions
CC which may be treated include eczema, allergic rhinitis, hayfever,
CC urticaria, food allergies and other atopic conditions, and the
CC infections which may be treated include viral, bacterial, fungal and
CC protozoal infections such as tuberculosis, AIDS, leishmania and
CC schistosomiasis. Immune response induction may also be used in the
CC treatment of an autoimmune disorder (e.g., lupus erythematosus,
CC rheumatoid arthritis and multiple sclerosis), a disease associated with
CC immune system deficiency, and symptoms resulting from exposure to an
CC agent of biological warfare. An immunogenic CpG oligonucleotide, either
CC alone or in combination with an anti-cancer agent, is useful for treating
CC solid tumour cancer. The induction of an immune response is used in
CC antisense therapy and to improve the efficacy of a vaccine. The
CC oligonucleotide is preferably administered to lymphocytes ex vivo,
CC producing activated lymphocytes which are then administered to the host.
CC The present sequence represents an immunogenic CpG oligodeoxynucleotide
CC of the invention.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

Query Match 100.0%; Score 20; DB 22; Length 20;
Best Local Similarity 100.0%; Pred. No. 2;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 10
AAC80618
ID AAC80618 standard; DNA; 20 BP.
XX
AC AAC80618;
XX
DT 14-FEB-2001 (first entry)
XX

DE Immunogenic CpG oligodeoxynucleotide, SEQ ID NO:38.
XX
KW CpG oligodeoxynucleotide; unmethylated; antigen-presenting cell;
KW immunogenic; cytokine release; natural killer cell; NK cell activation;
KW cell-mediated immune response; T-cell response; humoral response;
KW B-cell response; antibody production; immune response induction;
KW vaccine; allergy; asthma; infection; bacterial; viral; fungal; protozoal;
KW parasitic; tuberculosis; AIDS; autoimmune disease; lupus erythematosus;
KW rheumatoid arthritis; multiple sclerosis; solid tumour; cancer;
KW immune deficiency; biological warfare agent; cytostatic; antiarthritic;
KW antimicrobial; antiallergic; protozoacide; tuberculostatic;
KW antiasthmatic; dermatological; phosphorothioate; ss.
XX
OS Synthetic.
XX
PN WO200061151-A2.
XX
PD 19-OCT-2000.
XX
PF 12-APR-2000; 2000WO-US09839.
XX
PR 12-APR-1999; 99US-0128898.
XX
PA (KLIN/) KLINMAN D.
PA (ISHI/) ISHII K.
PA (VERT/) VERTHELYI D.
XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-006880/01.
XX
PT Novel oligonucleotides useful for the prevention and treatment of
PT allergies, cancer, and autoimmune disorders and for ameliorating
PT symptoms resulting from exposure to a bio-warfare agent -
XX
PS Claim 4; Page 30; 46pp; English.
XX
CC The invention relates to novel immunogenic CpG oligodeoxynucleotides
CC (AAC80581-C80723). The oligonucleotide are at least 10 bases long
CC and comprise one of the generic sequences 5'-NNNT-CpG-WNNN-3' or
CC 5'-RY-CpG-RY-3'. The central CpG motif is unmethylated, and the
CC oligonucleotides optionally have phosphorothioate linkages which make
CC them more resistant to degradation. The invention also relates to an
CC oligonucleotide delivery complex comprising an oligonucleotide of the
CC invention and a targetting agent, and a pharmaceutical composition
CC comprising the oligonucleotide delivery complex. The oligonucleotides
CC are able to induce either a cell-mediated (T-cell) response or a humoral
CC (B-cell, antibody) response, with oligonucleotides of the sequence
CC 5'-RY-CpG-RY-3' being able to induce a cell-mediated response, and those
CC of the sequence 5'-NNNT-CpG-WNNN-3' being able to induce a humoral
CC response. It is thought that after administration, the oligonucleotide
CC acts on antigen-presenting cells (e.g., macrophages and dendritic
CC cells), which then release cytokines, leading to activation of natural
CC killer (NK) cells. A cell-mediated or humoral response can then occur by
CC activation of T- or B-cells. The induction of an immune response is
CC useful for treating, preventing or ameliorating an allergic reaction
CC (preferably asthma), or an infection, where an immunogenic CpG
CC oligonucleotide is administered either alone or in combination with an
CC anti-allergenic agent or anti-infectious agent. The allergic conditions
CC which may be treated include eczema, allergic rhinitis, hayfever,
CC urticaria, food allergies and other atopic conditions, and the
CC infections which may be treated include viral, bacterial, fungal and
CC protozoal infections such as tuberculosis, AIDS, leishmania and
CC schistosomiasis. Immune response induction may also be used in the
CC treatment of an autoimmune disorder (e.g., lupus erythematosus,
CC rheumatoid arthritis and multiple sclerosis), a disease associated with
CC immune system deficiency, and symptoms resulting from exposure to an
CC agent of biological warfare. An immunogenic CpG oligonucleotide, either
CC alone or in combination with an anti-cancer agent, is useful for treating
CC solid tumour cancer. The induction of an immune response is used in
CC antisense therapy and to improve the efficacy of a vaccine. The
CC oligonucleotide is preferably administered to lymphocytes ex vivo,
CC producing activated lymphocytes which are then administered to the host.
CC The present sequence represents an immunogenic CpG oligodeoxynucleotide
CC of the invention.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

Query Match 100.0%; Score 20; DB 22; Length 20;
Best Local Similarity 100.0%; Pred. No. 2;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 11
AAC80623
ID AAC80623 standard; DNA; 20 BP.
XX
AC AAC80623;
XX
DT 14-FEB-2001 (first entry)
XX
DE Immunogenic CpG oligodeoxynucleotide, SEQ ID NO:43.
XX
KW CpG oligodeoxynucleotide; unmethylated; antigen-presenting cell;
KW immunogenic; cytokine release; natural killer cell; NK cell activation;
KW cell-mediated immune response; T-cell response; humoral response;
KW B-cell response; antibody production; immune response induction;
KW vaccine; allergy; asthma; infection; bacterial; viral; fungal; protozoal;
KW parasitic; tuberculosis; AIDS; autoimmune disease; lupus erythematosus;
KW rheumatoid arthritis; multiple sclerosis; solid tumour; cancer;
KW immune deficiency; biological warfare agent; cytostatic; antiarthritic;
KW antimicrobial; antiallergic; protozoacide; tuberculostatic;
KW antiasthmatic; dermatological; phosphorothioate; ss.
XX
OS Synthetic.
XX
PN WO200061151-A2.
XX
PD 19-OCT-2000.
XX
PF 12-APR-2000; 2000WO-US09839.
XX
PR 12-APR-1999; 99US-0128898.
XX
PA (KLIN/) KLINMAN D.
PA (ISHI/) ISHII K.
PA (VERT/) VERTHELYI D.
XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-006880/01.
XX
PT Novel oligonucleotides useful for the prevention and treatment of
PT allergies, cancer, and autoimmune disorders and for ameliorating
PT symptoms resulting from exposure to a bio-warfare agent -
XX
PS Claim 4; Page 30; 46pp; English.
XX
CC The invention relates to novel immunogenic CpG oligodeoxynucleotides
CC (AAC80581-C80723). The oligonucleotide are at least 10 bases long
CC and comprise one of the generic sequences 5'-NNNT-CpG-WNNN-3' or
CC 5'-RY-CpG-RY-3'. The central CpG motif is unmethylated, and the
CC oligonucleotides optionally have phosphorothioate linkages which make
CC them more resistant to degradation. The invention also relates to an
CC oligonucleotide delivery complex comprising an oligonucleotide of the
CC invention and a targetting agent, and a pharmaceutical composition
CC comprising the oligonucleotide delivery complex. The oligonucleotides
CC are able to induce either a cell-mediated (T-cell) response or a humoral
CC (B-cell, antibody) response, with oligonucleotides of the sequence
CC 5'-RY-CpG-RY-3' being able to induce a cell-mediated response, and those
CC of the sequence 5'-NNNT-CpG-WNNN-3' being able to induce a humoral
CC response. It is thought that after administration, the oligonucleotide

CC acts on antigen-presenting cells (e.g., macrophages and dendritic
CC cells), which then release cytokines, leading to activation of natural
CC killer (NK) cells. A cell-mediated or humoral response can then occur by
CC activation of T- or B-cells. The induction of an immune response is
CC useful for treating, preventing or ameliorating an allergic reaction
CC (preferably asthma), or an infection, where an immunogenic CpG
CC oligonucleotide is administered either alone or in combination with an
CC anti-allergenic agent or anti-infectious agent. The allergic conditions
CC which may be treated include eczema, allergic rhinitis, hayfever,
CC urticaria, food allergies and other atopic conditions, and the
CC infections which may be treated include viral, bacterial, fungal and
CC protozoal infections such as tuberculosis, AIDS, leishmania and
CC schistosomiasis. Immune response induction may also be used in the
CC treatment of an autoimmune disorder (e.g., lupus erythematosus,
CC rheumatoid arthritis and multiple sclerosis), a disease associated with
CC immune system deficiency, and symptoms resulting from exposure to an
CC agent of biological warfare. An immunogenic CpG oligonucleotide, either
CC alone or in combination with an anti-cancer agent, is useful for treating
CC solid tumour cancer. The induction of an immune response is used in
CC antisense therapy and to improve the efficacy of a vaccine. The
CC oligonucleotide is preferably administered to lymphocytes ex vivo,
CC producing activated lymphocytes which are then administered to the host.
CC The present sequence represents an immunogenic CpG oligodeoxynucleotide
CC of the invention.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

```
  Query Match             100.0%;  Score 20;  DB 22;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 2;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20
```

RESULT 12
AAC80652
ID AAC80652 standard; DNA; 20 BP.
XX
AC AAC80652;
XX
DT 14-FEB-2001 (first entry)
XX
DE Immunogenic CpG oligodeoxynucleotide, SEQ ID NO:72.
XX
KW CpG oligodeoxynucleotide; unmethylated; antigen-presenting cell;
KW immunogenic; cytokine release; natural killer cell; NK cell activation;
KW cell-mediated immune response; T-cell response; humoral response;
KW B-cell response; antibody production; immune response induction;
KW vaccine; allergy; asthma; infection; bacterial; viral; fungal; protozoal;
KW parasitic; tuberculosis; AIDS; autoimmune disease; lupus erythematosus;
KW rheumatoid arthritis; multiple sclerosis; solid tumour; cancer;
KW immune deficiency; biological warfare agent; cytostatic; antiarthritic;
KW antimicrobial; antiallergic; protozoacide; tuberculostatic;
KW antiasthmatic; dermatological; phosphorothioate; ss.
XX
OS Synthetic.
XX
PN WO200061151-A2.
XX
PD 19-OCT-2000.
XX
PF 12-APR-2000; 2000WO-US09839.
XX
PR 12-APR-1999; 99US-0128898.
XX
PA (KLIN/) KLINMAN D.
PA (ISHI/) ISHII K.
PA (VERT/) VERTHELYI D.
XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-006880/01.
XX
PT Novel oligonucleotides useful for the prevention and treatment of
PT allergies, cancer, and autoimmune disorders and for ameliorating
PT symptoms resulting from exposure to a bio-warfare agent -
XX
PS Claim 4; Page 35; 46pp; English.
XX
CC The invention relates to novel immunogenic CpG oligodeoxynucleotides
CC (AAC80581-C80723). The oligonucleotide are at least 10 bases long
CC and comprise one of the generic sequences 5'-NNNT-CpG-WNNN-3' or
CC 5'-RY-CpG-RY-3'. The central CpG motif is unmethylated, and the
CC oligonucleotides optionally have phosphorothioate linkages which make
CC them more resistant to degradation. The invention also relates to an
CC oligonucleotide delivery complex comprising an oligonucleotide of the
CC invention and a targetting agent, and a pharmaceutical composition
CC comprising the oligonucleotide delivery complex. The oligonucleotides
CC are able to induce either a cell-mediated (T-cell) response or a humoral
CC (B-cell, antibody) response, with oligonucleotides of the sequence
CC 5'-RY-CpG-RY-3' being able to induce a cell-mediated response, and those
CC of the sequence 5'-NNNT-CpG-WNNN-3' being able to induce a humoral
CC response. It is thought that after administration, the oligonucleotide
CC acts on antigen-presenting cells (e.g., macrophages and dendritic
CC cells), which then release cytokines, leading to activation of natural
CC killer (NK) cells. A cell-mediated or humoral response can then occur by
CC activation of T- or B-cells. The induction of an immune response is
CC useful for treating, preventing or ameliorating an allergic reaction
CC (preferably asthma), or an infection, where an immunogenic CpG
CC oligonucleotide is administered either alone or in combination with an
CC anti-allergenic agent or anti-infectious agent. The allergic conditions
CC which may be treated include eczema, allergic rhinitis, hayfever,
CC urticaria, food allergies and other atopic conditions, and the
CC infections which may be treated include viral, bacterial, fungal and
CC protozoal infections such as tuberculosis, AIDS, leishmania and
CC schistosomiasis. Immune response induction may also be used in the
CC treatment of an autoimmune disorder (e.g., lupus erythematosus,
CC rheumatoid arthritis and multiple sclerosis), a disease associated with
CC immune system deficiency, and symptoms resulting from exposure to an
CC agent of biological warfare. An immunogenic CpG oligonucleotide, either
CC alone or in combination with an anti-cancer agent, is useful for treating
CC solid tumour cancer. The induction of an immune response is used in
CC antisense therapy and to improve the efficacy of a vaccine. The
CC oligonucleotide is preferably administered to lymphocytes ex vivo,
CC producing activated lymphocytes which are then administered to the host.
CC The present sequence represents an immunogenic CpG oligodeoxynucleotide
CC of the invention.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

```
  Query Match             100.0%;  Score 20;  DB 22;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 2;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20
```

RESULT 13
ABK46460
ID ABK46460 standard; DNA; 20 BP.
XX
AC ABK46460;
XX
DT 05-JUN-2002 (first entry)
XX
DE Immunostimulatory unmethylated CpG oligodideoxynucleotide #50.
XX
KW unmethylated CpG; oligdideoxynucleotide; ODN; virucide; vaccine;
KW Paramyxoviridae; F protein; respiratory syncytial virus; RSV;
KW viral bronchiolitis; pneumonia; infectious pulmonary disease;
KW bronchopulmonary dysplasia; congenital heart condition; ss.
XX

OS Synthetic.
XX
PN WO200211761-A2.
XX
PD 14-FEB-2002.
XX
PF 09-AUG-2001; 2001WO-US41633.
XX
PR 10-AUG-2000; 2000US-224011P.
PR 01-SEP-2000; 2000US-229307P.
XX
PA (JACK-) JACKSON FOUND ADVANCEMENT MILITARY MED.
XX
PI Mond JJ, Prince G, Klinman DM;
XX
DR WPI; 2002-227118/28.
XX
PT Vaccine for immunising patient against respiratory syncytial virus, has
PT epitopes of Paramyxoviridae F protein, and cytosine followed by guanine
PT linked by phosphate bond-oligodideoxynucleotides -
XX
PS Claim 4; Page 8; 30pp; English.
XX
CC The invention describes a vaccine comprising one or more epitopes of a
CC Paramyxoviridae F protein, and one or more CpG (cytosine followed by
CC guanine linked by phosphate bond)-oligodideoxynucleotides (ODNs). The
CC vaccine is useful for vaccinating a patient especially against viruses
CC of the Paramyxoviridae family e.g. respiratory syncytial virus (RSV),
CC the primary cause of viral bronchiolitis and pneumonia in infants and
CC children, and infectious pulmonary disease in infants. RSV has been
CC particularly implicated in death of infants that are premature, have
CC bronchopulmonary dysplasia, or congenital heart conditions. This
CC sequence represents an oligodideoxynucleotide that can be used in the
CC creation of the vaccine.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

Query Match 100.0%; Score 20; DB 24; Length 20;
Best Local Similarity 100.0%; Pred. No. 2;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 14
ABK46462
ID ABK46462 standard; DNA; 20 BP.
XX
AC ABK46462;
XX
DT 05-JUN-2002 (first entry)
XX
DE Immunostimulatory unmethylated CpG oligodideoxynucleotide #52.
XX
KW unmethylated CpG; oligdideoxynucleotide; ODN; virucide; vaccine;
KW Paramyxoviridae; F protein; respiratory syncytial virus; RSV;
KW viral bronchiolitis; pneumonia; infectious pulmonary disease;
KW bronchopulmonary dysplasia; congenital heart condition; ss.
XX
OS Synthetic.
XX
PN WO200211761-A2.
XX
PD 14-FEB-2002.
XX
PF 09-AUG-2001; 2001WO-US41633.
XX
PR 10-AUG-2000; 2000US-224011P.
PR 01-SEP-2000; 2000US-229307P.
XX
PA (JACK-) JACKSON FOUND ADVANCEMENT MILITARY MED.
XX
PI Mond JJ, Prince G, Klinman DM;
XX
DR WPI; 2002-227118/28.
XX
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PT epitopes of Paramyxoviridae F protein, and cytosine followed by guanine
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XX
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CC Paramyxoviridae F protein, and one or more CpG (cytosine followed by
CC guanine linked by phosphate bond)-oligodideoxynucleotides (ODNs). The
CC vaccine is useful for vaccinating a patient especially against viruses
CC of the Paramyxoviridae family e.g. respiratory syncytial virus (RSV),
CC the primary cause of viral bronchiolitis and pneumonia in infants and
CC children, and infectious pulmonary disease in infants. RSV has been
CC particularly implicated in death of infants that are premature, have
CC bronchopulmonary dysplasia, or congenital heart conditions. This
CC sequence represents an oligodideoxynucleotide that can be used in the
CC creation of the vaccine.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

Query Match 100.0%; Score 20; DB 24; Length 20;
Best Local Similarity 100.0%; Pred. No. 2;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
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Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 15
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ID ABK46465 standard; DNA; 20 BP.
XX
AC ABK46465;
XX
DT 05-JUN-2002 (first entry)
XX
DE Immunostimulatory unmethylated CpG oligodideoxynucleotide #55.
XX
KW unmethylated CpG; oligdideoxynucleotide; ODN; virucide; vaccine;
KW Paramyxoviridae; F protein; respiratory syncytial virus; RSV;
KW viral bronchiolitis; pneumonia; infectious pulmonary disease;
KW bronchopulmonary dysplasia; congenital heart condition; ss.
XX
OS Synthetic.
XX
PN WO200211761-A2.
XX
PD 14-FEB-2002.
XX
PF 09-AUG-2001; 2001WO-US41633.
XX
PR 10-AUG-2000; 2000US-224011P.
PR 01-SEP-2000; 2000US-229307P.
XX
PA (JACK-) JACKSON FOUND ADVANCEMENT MILITARY MED.
XX
PI Mond JJ, Prince G, Klinman DM;
XX
DR WPI; 2002-227118/28.
XX
PT Vaccine for immunising patient against respiratory syncytial virus, has
PT epitopes of Paramyxoviridae F protein, and cytosine followed by guanine
PT linked by phosphate bond-oligodideoxynucleotides -
XX
PS Claim 4; Page 8; 30pp; English.
XX
CC The invention describes a vaccine comprising one or more epitopes of a

CC Paramyxoviridae F protein, and one or more CpG (cytosine followed by
CC guanine linked by phosphate bond)-oligodideoxynucleotides (ODNs). The
CC vaccine is useful for vaccinating a patient especially against viruses
CC of the Paramyxoviridae family e.g. respiratory syncytial virus (RSV),
CC the primary cause of viral bronchiolitis and pneumonia in infants and
CC children, and infectious pulmonary disease in infants. RSV has been
CC particularly implicated in death of infants that are premature, have
CC bronchopulmonary dysplasia, or congenital heart conditions. This
CC sequence represents an oligodideoxynucleotide that can be used in the
CC creation of the vaccine.
XX
SQ Sequence 20 BP; 3 A; 3 C; 11 G; 3 T; 0 other;

Query Match 100.0%; Score 20; DB 24; Length 20;
Best Local Similarity 100.0%; Pred. No. 2;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 GGTGCATCGATGCAGGGGGG 20
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Db          1 GGTGCATCGATGCAGGGGGG 20
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Search completed: January 20, 2004, 17:31:47
Job time : 124.706 secs

OM nucleic - nucleic search, using sw model

Run on: January 20, 2004, 16:34:44 ; Search time 132.353 Seconds
(without alignments)
532.631 Million cell updates/sec

Title: US-10-068-160-54
Perfect score: 20
Sequence: 1 ggtgcatcgatgcaggggggg 20

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 2324096 seqs, 1762381658 residues

Total number of hits satisfying chosen parameters: 4648192

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published_Applications_NA:*
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2: /cgn2_6/ptodata/1/pubpna/PCT_NEW_PUB.seq:*
3: /cgn2_6/ptodata/1/pubpna/US06_NEW_PUB.seq:*
4: /cgn2_6/ptodata/1/pubpna/US06_PUBCOMB.seq:*
5: /cgn2_6/ptodata/1/pubpna/US07_NEW_PUB.seq:*
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9: /cgn2_6/ptodata/1/pubpna/US09A_PUBCOMB.seq:*
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11: /cgn2_6/ptodata/1/pubpna/US09C_PUBCOMB.seq:*
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13: /cgn2_6/ptodata/1/pubpna/US09_NEW_PUB.seq2:*
14: /cgn2_6/ptodata/1/pubpna/US10A_PUBCOMB.seq:*
15: /cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
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17: /cgn2_6/ptodata/1/pubpna/US60_NEW_PUB.seq:*
18: /cgn2_6/ptodata/1/pubpna/US60_PUBCOMB.seq:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	20	100.0	20	13	US-10-194-035-32	Sequence 32, Appl
2	20	100.0	20	13	US-10-194-035-34	Sequence 34, Appl
3	20	100.0	20	13	US-10-194-035-37	Sequence 37, Appl
4	20	100.0	20	13	US-10-194-035-38	Sequence 38, Appl
5	20	100.0	20	13	US-10-194-035-43	Sequence 43, Appl
6	20	100.0	20	13	US-10-194-035-72	Sequence 72, Appl
7	20	100.0	20	15	US-10-068-160-1	Sequence 1, Appli
8	20	100.0	20	15	US-10-068-160-54	Sequence 54, Appl
9	19	95.0	19	13	US-10-194-035-53	Sequence 53, Appl
10	19	95.0	19	13	US-10-194-035-73	Sequence 73, Appl
11	18.4	92.0	20	13	US-10-194-035-40	Sequence 40, Appl
12	18.4	92.0	20	13	US-10-194-035-81	Sequence 81, Appl
13	18.4	92.0	20	13	US-10-194-035-82	Sequence 82, Appl
14	18.4	92.0	20	13	US-10-194-035-100	Sequence 100, App
15	18.4	92.0	20	13	US-10-194-035-101	Sequence 101, App
16	18.4	92.0	20	13	US-10-194-035-104	Sequence 104, App
17	18.4	92.0	20	13	US-10-194-035-106	Sequence 106, App
18	18.4	92.0	20	13	US-10-194-035-107	Sequence 107, App
19	18.4	92.0	20	15	US-10-068-160-7	Sequence 7, Appli
20	18.4	92.0	20	15	US-10-068-160-11	Sequence 11, Appl
21	18.4	92.0	20	15	US-10-068-160-21	Sequence 21, Appl
22	18.4	92.0	20	15	US-10-068-160-30	Sequence 30, Appl
23	18.4	92.0	20	15	US-10-068-160-35	Sequence 35, Appl
24	18.4	92.0	20	15	US-10-068-160-37	Sequence 37, Appl
25	18.4	92.0	20	15	US-10-068-160-52	Sequence 52, Appl
26	18.4	92.0	20	15	US-10-068-160-53	Sequence 53, Appl
27	18.4	92.0	20	15	US-10-068-160-64	Sequence 64, Appl
28	18.4	92.0	20	15	US-10-068-160-65	Sequence 65, Appl
29	18	90.0	18	15	US-10-068-160-12	Sequence 12, Appl
30	18	90.0	20	15	US-10-068-160-38	Sequence 38, Appl
31	17.4	87.0	19	13	US-10-194-035-22	Sequence 22, Appl
32	17.4	87.0	19	13	US-10-194-035-83	Sequence 83, Appl
33	17.4	87.0	19	13	US-10-194-035-88	Sequence 88, Appl
34	17	85.0	17	13	US-10-194-035-27	Sequence 27, Appl
35	16.8	84.0	20	13	US-10-194-035-39	Sequence 39, Appl
36	16.8	84.0	20	13	US-10-194-035-41	Sequence 41, Appl
37	16.8	84.0	20	13	US-10-194-035-42	Sequence 42, Appl
38	16.8	84.0	20	13	US-10-194-035-90	Sequence 90, Appl
39	16.8	84.0	20	13	US-10-194-035-94	Sequence 94, Appl
40	16.8	84.0	20	13	US-10-194-035-96	Sequence 96, Appl
41	16.8	84.0	20	13	US-10-194-035-102	Sequence 102, App
42	16.8	84.0	20	15	US-10-068-160-2	Sequence 2, Appli
43	16.8	84.0	20	15	US-10-068-160-26	Sequence 26, Appl
44	16.8	84.0	20	15	US-10-068-160-31	Sequence 31, Appl
45	16.8	84.0	20	15	US-10-068-160-40	Sequence 40, Appl

ALIGNMENTS

RESULT 1
US-10-194-035-32
; Sequence 32, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
; APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
; APPLICANT: SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
; APPLICANT: KLINMAN, Dennis
; APPLICANT: ISHII, Ken
; APPLICANT: VERTHELYI, Daniela
; TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
; FILE REFERENCE: 4239-63317
; CURRENT APPLICATION NUMBER: US/10/194,035
; CURRENT FILING DATE: 2002-07-12
; PRIOR APPLICATION NUMBER: PCT/US01/01122
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: US 60/176,115
; PRIOR FILING DATE: 2000-01-14
; NUMBER OF SEQ ID NOS: 119
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 32
; LENGTH: 20
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-32

Query Match 100.0%; Score 20; DB 13; Length 20;
Best Local Similarity 100.0%; Pred. No. 2.1;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20
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RESULT 2

US-10-194-035-34
; Sequence 34, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
; APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
; APPLICANT: SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
; APPLICANT: KLINMAN, Dennis
; APPLICANT: ISHII, Ken
; APPLICANT: VERTHELYI, Daniela
; TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
; FILE REFERENCE: 4239-63317
; CURRENT APPLICATION NUMBER: US/10/194,035
; CURRENT FILING DATE: 2002-07-12
; PRIOR APPLICATION NUMBER: PCT/US01/01122
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: US 60/176,115
; PRIOR FILING DATE: 2000-01-14
; NUMBER OF SEQ ID NOS: 119
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 34
; LENGTH: 20
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-34

Query Match 100.0%; Score 20; DB 13; Length 20;
Best Local Similarity 100.0%; Pred. No. 2.1;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 3
US-10-194-035-37
; Sequence 37, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
; APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
; APPLICANT: SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
; APPLICANT: KLINMAN, Dennis
; APPLICANT: ISHII, Ken
; APPLICANT: VERTHELYI, Daniela
; TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
; FILE REFERENCE: 4239-63317
; CURRENT APPLICATION NUMBER: US/10/194,035
; CURRENT FILING DATE: 2002-07-12
; PRIOR APPLICATION NUMBER: PCT/US01/01122
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: US 60/176,115
; PRIOR FILING DATE: 2000-01-14
; NUMBER OF SEQ ID NOS: 119
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 37
; LENGTH: 20
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-37

Query Match 100.0%; Score 20; DB 13; Length 20;
Best Local Similarity 100.0%; Pred. No. 2.1;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
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Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 4
US-10-194-035-38
; Sequence 38, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
; APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
; APPLICANT: SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
; APPLICANT: KLINMAN, Dennis
; APPLICANT: ISHII, Ken
; APPLICANT: VERTHELYI, Daniela
; TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
; FILE REFERENCE: 4239-63317
; CURRENT APPLICATION NUMBER: US/10/194,035
; CURRENT FILING DATE: 2002-07-12
; PRIOR APPLICATION NUMBER: PCT/US01/01122
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: US 60/176,115
; PRIOR FILING DATE: 2000-01-14
; NUMBER OF SEQ ID NOS: 119
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 38
; LENGTH: 20
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-38

Query Match 100.0%; Score 20; DB 13; Length 20;
Best Local Similarity 100.0%; Pred. No. 2.1;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGGG 20

RESULT 5
US-10-194-035-43
; Sequence 43, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
; APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
; APPLICANT: SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
; APPLICANT: KLINMAN, Dennis
; APPLICANT: ISHII, Ken
; APPLICANT: VERTHELYI, Daniela
; TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
; FILE REFERENCE: 4239-63317
; CURRENT APPLICATION NUMBER: US/10/194,035
; CURRENT FILING DATE: 2002-07-12
; PRIOR APPLICATION NUMBER: PCT/US01/01122
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: US 60/176,115
; PRIOR FILING DATE: 2000-01-14
; NUMBER OF SEQ ID NOS: 119
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 43
; LENGTH: 20
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-43

Query Match 100.0%; Score 20; DB 13; Length 20;
Best Local Similarity 100.0%; Pred. No. 2.1;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
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Db 1 GGTGCATCGATGCAGGGGGG 20

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RESULT 6
US-10-194-035-72
; Sequence 72, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
;  APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
;  APPLICANT:  SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
;  APPLICANT:  KLINMAN, Dennis
;  APPLICANT:  ISHII, Ken
;  APPLICANT:  VERTHELYI, Daniela
;  TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
;  FILE REFERENCE: 4239-63317
;  CURRENT APPLICATION NUMBER: US/10/194,035
;  CURRENT FILING DATE:  2002-07-12
;  PRIOR APPLICATION NUMBER: PCT/US01/01122
;  PRIOR FILING DATE: 2001-07-19
;  PRIOR APPLICATION NUMBER: US 60/176,115
;  PRIOR FILING DATE: 2000-01-14
;  NUMBER OF SEQ ID NOS: 119
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 72
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-72

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  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

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Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 7
US-10-068-160-1
; Sequence 1, Application US/10068160
; Publication No. US20030060440A1
; GENERAL INFORMATION:
;  APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA, REPRESENTED BY THE
;  APPLICANT:  SECRETARY, DEPARTMENT OF HEALTH AND HUMAN SERVICES
;  APPLICANT:  KLINMAN, Dennis
;  APPLICANT:  ISHII, Ken
;  APPLICANT:  VERTHELYI, Daniela
;  TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
;  FILE REFERENCE: 4239-61999
;  CURRENT APPLICATION NUMBER: US/10/068,160
;  CURRENT FILING DATE:  2002-02-06
;  PRIOR APPLICATION NUMBER: 60/128,898
;  PRIOR FILING DATE: 1999-04-12
;  NUMBER OF SEQ ID NOS: 120
;  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 1
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Oligonucleotide
US-10-068-160-1

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  Best Local Similarity   100.0%;  Pred. No. 2.1;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 8
US-10-068-160-54
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; Publication No. US20030060440A1
; GENERAL INFORMATION:
;  APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA, REPRESENTED BY THE
;  APPLICANT:  SECRETARY, DEPARTMENT OF HEALTH AND HUMAN SERVICES
;  APPLICANT:  KLINMAN, Dennis
;  APPLICANT:  ISHII, Ken
;  APPLICANT:  VERTHELYI, Daniela
;  TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
;  FILE REFERENCE: 4239-61999
;  CURRENT APPLICATION NUMBER: US/10/068,160
;  CURRENT FILING DATE:  2002-02-06
;  PRIOR APPLICATION NUMBER: 60/128,898
;  PRIOR FILING DATE: 1999-04-12
;  NUMBER OF SEQ ID NOS: 120
;  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 54
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Oligonucleotide
US-10-068-160-54

  Query Match             100.0%;  Score 20;  DB 15;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 2.1;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGGG 20
              ||||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGGG 20


RESULT 9
US-10-194-035-53
; Sequence 53, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
;  APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
;  APPLICANT:  SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
;  APPLICANT:  KLINMAN, Dennis
;  APPLICANT:  ISHII, Ken
;  APPLICANT:  VERTHELYI, Daniela
;  TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
;  FILE REFERENCE: 4239-63317
;  CURRENT APPLICATION NUMBER: US/10/194,035
;  CURRENT FILING DATE:  2002-07-12
;  PRIOR APPLICATION NUMBER: PCT/US01/01122
;  PRIOR FILING DATE: 2001-07-19
;  PRIOR APPLICATION NUMBER: US 60/176,115
;  PRIOR FILING DATE: 2000-01-14
;  NUMBER OF SEQ ID NOS: 119
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 53
;   LENGTH: 19
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-53

  Query Match             95.0%;  Score 19;  DB 13;  Length 19;
  Best Local Similarity   100.0%;  Pred. No. 6.6;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGTGCATCGATGCAGGGGG 19
              |||||||||||||||||||
Db          1 GGTGCATCGATGCAGGGGG 19


RESULT 10
```

US-10-194-035-73
; Sequence 73, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
; APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
; APPLICANT: SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
; APPLICANT: KLINMAN, Dennis
; APPLICANT: ISHII, Ken
; APPLICANT: VERTHELYI, Daniela
; TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
; FILE REFERENCE: 4239-63317
; CURRENT APPLICATION NUMBER: US/10/194,035
; CURRENT FILING DATE: 2002-07-12
; PRIOR APPLICATION NUMBER: PCT/US01/01122
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: US 60/176,115
; PRIOR FILING DATE: 2000-01-14
; NUMBER OF SEQ ID NOS: 119
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 73
; LENGTH: 19
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-73

Query Match 95.0%; Score 19; DB 13; Length 19;
Best Local Similarity 100.0%; Pred. No. 6.6;
Matches 19; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGG 19
||||||||||||||||||||
Db 1 GGTGCATCGATGCAGGGGG 19

RESULT 11
US-10-194-035-40
; Sequence 40, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
; APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
; APPLICANT: SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
; APPLICANT: KLINMAN, Dennis
; APPLICANT: ISHII, Ken
; APPLICANT: VERTHELYI, Daniela
; TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
; FILE REFERENCE: 4239-63317
; CURRENT APPLICATION NUMBER: US/10/194,035
; CURRENT FILING DATE: 2002-07-12
; PRIOR APPLICATION NUMBER: PCT/US01/01122
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: US 60/176,115
; PRIOR FILING DATE: 2000-01-14
; NUMBER OF SEQ ID NOS: 119
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 40
; LENGTH: 20
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-40

Query Match 92.0%; Score 18.4; DB 13; Length 20;
Best Local Similarity 95.0%; Pred. No. 13;
Matches 19; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||| ||||||||||||||
Db 1 GGTGCGTCGATGCAGGGGGG 20

RESULT 12
US-10-194-035-81
; Sequence 81, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
; APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
; APPLICANT: SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
; APPLICANT: KLINMAN, Dennis
; APPLICANT: ISHII, Ken
; APPLICANT: VERTHELYI, Daniela
; TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
; FILE REFERENCE: 4239-63317
; CURRENT APPLICATION NUMBER: US/10/194,035
; CURRENT FILING DATE: 2002-07-12
; PRIOR APPLICATION NUMBER: PCT/US01/01122
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: US 60/176,115
; PRIOR FILING DATE: 2000-01-14
; NUMBER OF SEQ ID NOS: 119
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 81
; LENGTH: 20
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-81

Query Match 92.0%; Score 18.4; DB 13; Length 20;
Best Local Similarity 95.0%; Pred. No. 13;
Matches 19; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||| ||||||||||||||
Db 1 GGTGCGTCGATGCAGGGGGG 20

RESULT 13
US-10-194-035-82
; Sequence 82, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
; APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
; APPLICANT: SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
; APPLICANT: KLINMAN, Dennis
; APPLICANT: ISHII, Ken
; APPLICANT: VERTHELYI, Daniela
; TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
; FILE REFERENCE: 4239-63317
; CURRENT APPLICATION NUMBER: US/10/194,035
; CURRENT FILING DATE: 2002-07-12
; PRIOR APPLICATION NUMBER: PCT/US01/01122
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: US 60/176,115
; PRIOR FILING DATE: 2000-01-14
; NUMBER OF SEQ ID NOS: 119
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 82
; LENGTH: 20
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-82

Query Match 92.0%; Score 18.4; DB 13; Length 20;
Best Local Similarity 95.0%; Pred. No. 13;
Matches 19; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||| ||||||||||||||
Db 1 GGTGCGTCGATGCAGGGGGG 20

RESULT 14
US-10-194-035-100
; Sequence 100, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
; APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
; APPLICANT: SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
; APPLICANT: KLINMAN, Dennis
; APPLICANT: ISHII, Ken
; APPLICANT: VERTHELYI, Daniela
; TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
; FILE REFERENCE: 4239-63317
; CURRENT APPLICATION NUMBER: US/10/194,035
; CURRENT FILING DATE: 2002-07-12
; PRIOR APPLICATION NUMBER: PCT/US01/01122
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: US 60/176,115
; PRIOR FILING DATE: 2000-01-14
; NUMBER OF SEQ ID NOS: 119
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 100
; LENGTH: 20
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-100

Query Match 92.0%; Score 18.4; DB 13; Length 20;
Best Local Similarity 95.0%; Pred. No. 13;
Matches 19; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
||||||||||| |||||||||
Db 1 GGTGCATCGACGCAGGGGGG 20

RESULT 15
US-10-194-035-101
; Sequence 101, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
; APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
; APPLICANT: SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
; APPLICANT: KLINMAN, Dennis
; APPLICANT: ISHII, Ken
; APPLICANT: VERTHELYI, Daniela
; TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
; FILE REFERENCE: 4239-63317
; CURRENT APPLICATION NUMBER: US/10/194,035
; CURRENT FILING DATE: 2002-07-12
; PRIOR APPLICATION NUMBER: PCT/US01/01122
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: US 60/176,115
; PRIOR FILING DATE: 2000-01-14
; NUMBER OF SEQ ID NOS: 119
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 101
; LENGTH: 20
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-101

Query Match 92.0%; Score 18.4; DB 13; Length 20;
Best Local Similarity 95.0%; Pred. No. 13;
Matches 19; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 GGTGCATCGATGCAGGGGGG 20
|||||| |||||||||||||
Db 1 GGTGCACCGATGCAGGGGGG 20

Search completed: January 20, 2004, 17:24:35
Job time : 132.353 secs

OM nucleic - nucleic search, using sw model

Run on: January 20, 2004, 17:31:58 ; Search time 565.647 Seconds
(without alignments)
1157.177 Million cell updates/sec

Title: US-10-068-160-73
Perfect score: 16
Sequence: 1 actctggagcgttctc 16

Scoring table: OLIGO_NUC
Gapop 60.0 , Gapext 60.0

Searched: 2888711 seqs, 20454813386 residues

Word size : 0

Total number of hits satisfying chosen parameters: 3159832

Minimum DB seq length: 0
Maximum DB seq length: 500

Post-processing: Listing first 45 summaries

Database : GenEmbl:*
1: gb_ba:*
2: gb_htg:*
3: gb_in:*
4: gb_om:*
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10: gb_ro:*
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13: gb_un:*
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15: em_ba:*
16: em_fun:*
17: em_hum:*
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21: em_or:*
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23: em_pat:*
24: em_ph:*
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26: em_ro:*
27: em_sts:*
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32: em_htg_other:*
33: em_htg_mus:*
34: em_htg_pln:*
35: em_htg_rod:*
36: em_htg_mam:*
37: em_htg_vrt:*
38: em_sy:*
39: em_htgo_hum:*
40: em_htgo_mus:*
41: em_htgo_other:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.		Score	% Query Match	Length	DB	ID	Description
1		14	87.5	376	11	G01127	G01127 fruit fly S
2	c	13	81.2	20	6	AR096705	AR096705 Sequence
3	c	13	81.2	20	6	AR135049	AR135049 Sequence
4	c	13	81.2	20	6	AR140471	AR140471 Sequence
5	c	13	81.2	20	6	AR146307	AR146307 Sequence
6	c	13	81.2	20	6	AR154698	AR154698 Sequence
7	c	13	81.2	20	6	AR213824	AR213824 Sequence
8	c	13	81.2	20	6	AR222194	AR222194 Sequence
9	c	13	81.2	20	6	AX104390	AX104390 Sequence
10	c	13	81.2	20	6	AX104402	AX104402 Sequence
11	c	13	81.2	20	6	AX104555	AX104555 Sequence
12	c	13	81.2	20	6	AX105160	AX105160 Sequence
13	c	13	81.2	20	6	AX342397	AX342397 Sequence
14	c	13	81.2	20	6	AX342424	AX342424 Sequence
15	c	13	81.2	20	6	AX342457	AX342457 Sequence
16	c	13	81.2	20	6	AX351738	AX351738 Sequence
17	c	13	81.2	20	6	AX351804	AX351804 Sequence
18	c	13	81.2	20	6	AX351825	AX351825 Sequence
19	c	13	81.2	20	6	AX351826	AX351826 Sequence
20	c	13	81.2	20	6	AX351827	AX351827 Sequence
21	c	13	81.2	20	6	AX351850	AX351850 Sequence
22	c	13	81.2	20	6	AX351851	AX351851 Sequence
23	c	13	81.2	20	6	AX351852	AX351852 Sequence
24	c	13	81.2	20	6	AX351853	AX351853 Sequence
25	c	13	81.2	20	6	AX351876	AX351876 Sequence
26	c	13	81.2	20	6	AX351901	AX351901 Sequence
27	c	13	81.2	20	6	AX352136	AX352136 Sequence
28	c	13	81.2	20	6	AX355091	AX355091 Sequence
29	c	13	81.2	20	6	AX355249	AX355249 Sequence
30	c	13	81.2	20	6	AX355250	AX355250 Sequence
31	c	13	81.2	20	6	AX455570	AX455570 Sequence
32	c	13	81.2	20	6	AX547443	AX547443 Sequence
33	c	13	81.2	20	6	AX547455	AX547455 Sequence
34	c	13	81.2	20	6	AX547608	AX547608 Sequence
35	c	13	81.2	20	6	BD009078	BD009078 Immunosti
36	c	13	81.2	21	6	AX352002	AX352002 Sequence
37	c	13	81.2	21	6	AX352021	AX352021 Sequence
38	c	13	81.2	22	6	AX352040	AX352040 Sequence
39	c	13	81.2	22	6	AX352117	AX352117 Sequence
40	c	13	81.2	24	6	AX351922	AX351922 Sequence
41	c	13	81.2	25	6	AX351855	AX351855 Sequence
42	c	13	81.2	26	6	AX351724	AX351724 Sequence
43	c	13	81.2	26	6	AX351854	AX351854 Sequence
44	c	13	81.2	28	6	AX351766	AX351766 Sequence
45	c	13	81.2	28	6	AX351785	AX351785 Sequence

ALIGNMENTS

RESULT 1
G01127
LOCUS G01127 376 bp DNA linear STS 28-FEB-1995
DEFINITION fruit fly STS Dm1823 clone DS02256 T7, sequence tagged site.
ACCESSION G01127
VERSION G01127.1 GI:684531
KEYWORDS STS; STS sequence; primer; sequence tagged site.
SOURCE Drosophila melanogaster (fruit fly)
ORGANISM Drosophila melanogaster
Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Ephydroidea; Drosophilidae; Drosophila.
REFERENCE 1 (bases 1 to 376)
AUTHORS Rubin,G.
TITLE Drosophila STS

```
  JOURNAL   Unpublished (1994)
COMMENT
            Contact:
            Berkeley Drosophila Genome Project

            Primer A: CACGGATGTTTGGCAAGT
            Primer B: CATAGGGAGATGGATTCGTG
            STS size: 152
            PCR Profile:
                 Annealing:  58 degrees C
                 PCR Cycles: 32
            Protocol:
                 Template:    P1 Library Pools
                 Primer:      1 uM each
                 dNTPs:       250 uM each
                 Taq Poly:    0.05 units/ul
                 Total Vol:   15 ul

            Buffer:
                 MgCl2:       1.5mM
                 KCl:        50  mM
                 Tris-HCl:   50  mM
                 pH:          8.3
                 Gelatin:      .001 %

            The P1 library has been distributed to 16 regional sites.  A list
            of these sites is available from FlyBase, via anonymous ftp to
            ftp.bio.indiana.edu in the file
            flybase/allied-data/genome-projects/lbl/LBL.doc.
FEATURES             Location/Qualifiers
     source          1. .376
                     /organism="Drosophila melanogaster"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:7227"
     STS             154. .305
     primer_bind     154. .171
     primer_bind     complement(286. .305)
BASE COUNT       76 a     86 c     92 g    118 t      4 others
ORIGIN

  Query Match             87.5%;  Score 14;  DB 11;  Length 376;
  Best Local Similarity   100.0%;  Pred. No. 2.6e+02;
  Matches   14;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          3 TCTGGAGCGTTCTC 16
              ||||||||||||||
Db        318 TCTGGAGCGTTCTC 331


RESULT 2
AR096705/c
LOCUS       AR096705                  20 bp    DNA     linear   PAT 08-SEP-2000
DEFINITION  Sequence 20 from patent US 6008200.
ACCESSION   AR096705
VERSION     AR096705.1  GI:10025735
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 20)
  AUTHORS   Krieg,A.M.
  TITLE     Immunomodulatory oligonucleotides
  JOURNAL   Patent: US 6008200-A 20 28-DEC-1999;
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="unknown"
BASE COUNT        6 a      6 c      5 g      3 t
ORIGIN

  Query Match             81.2%;  Score 13;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 1.2e+03;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          4 CTGGAGCGTTCTC 16
              |||||||||||||
Db         13 CTGGAGCGTTCTC 1


RESULT 3
AR135049/c
LOCUS       AR135049                  20 bp    DNA     linear   PAT 16-MAY-2001
DEFINITION  Sequence 20 from patent US 6194388.
ACCESSION   AR135049
VERSION     AR135049.1  GI:14123954
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 20)
  AUTHORS   Krieg,A.M., Klinman,D. and Steinberg,A.D.
  TITLE     Immunomodulatory oligonucleotides
  JOURNAL   Patent: US 6194388-A 20 27-FEB-2001;
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="unknown"
BASE COUNT        6 a      6 c      5 g      3 t
ORIGIN

  Query Match             81.2%;  Score 13;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 1.2e+03;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          4 CTGGAGCGTTCTC 16
              |||||||||||||
Db         13 CTGGAGCGTTCTC 1


RESULT 4
AR140471/c
LOCUS       AR140471                  20 bp    DNA     linear   PAT 16-JUN-2001
DEFINITION  Sequence 30 from patent US 6207646.
ACCESSION   AR140471
VERSION     AR140471.1  GI:14482967
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 20)
  AUTHORS   Krieg,A.M., Kline,J., Klinman,D. and Steinberg,A.D.
  TITLE     Immunostimulatory nucleic acid molecules
  JOURNAL   Patent: US 6207646-A 30 27-MAR-2001;
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="unknown"
BASE COUNT        6 a      6 c      5 g      3 t
ORIGIN

  Query Match             81.2%;  Score 13;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 1.2e+03;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          4 CTGGAGCGTTCTC 16
              |||||||||||||
Db         13 CTGGAGCGTTCTC 1


RESULT 5
AR146307/c
LOCUS       AR146307                  20 bp    DNA     linear   PAT 08-AUG-2001
DEFINITION  Sequence 19 from patent US 6218371.
ACCESSION   AR146307
VERSION     AR146307.1  GI:15109496
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown..
            Unclassified.
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REFERENCE   1  (bases 1 to 20)
  AUTHORS   Krieg,A.M. and Weiner,G.
  TITLE     Methods and products for stimulating the immune system using
            immunotherapeutic oligonucleotides and cytokines
  JOURNAL   Patent: US 6218371-A 19 17-APR-2001;
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="unknown"
BASE COUNT        6 a      6 c      5 g      3 t
ORIGIN

  Query Match             81.2%;  Score 13;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 1.2e+03;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          4 CTGGAGCGTTCTC 16
              |||||||||||||
Db         13 CTGGAGCGTTCTC 1


RESULT 6
AR154698/c
LOCUS       AR154698                  20 bp    DNA     linear   PAT 08-AUG-2001
DEFINITION  Sequence 27 from patent US 6239116.
ACCESSION   AR154698
VERSION     AR154698.1  GI:15122751
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 20)
  AUTHORS   Krieg,A.M. and Kline,J.N.
  TITLE     Immunostimulatory nucleic acid molecules
  JOURNAL   Patent: US 6239116-A 27 29-MAY-2001;
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="unknown"
BASE COUNT        6 a      6 c      5 g      3 t
ORIGIN

  Query Match             81.2%;  Score 13;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 1.2e+03;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          4 CTGGAGCGTTCTC 16
              |||||||||||||
Db         13 CTGGAGCGTTCTC 1


RESULT 7
AR213824/c
LOCUS       AR213824                  20 bp    DNA     linear   PAT 25-SEP-2002
DEFINITION  Sequence 16 from patent US 6406705.
ACCESSION   AR213824
VERSION     AR213824.1  GI:23311223
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 20)
  AUTHORS   Davis,H.L., Schorr,J. and Krieg,A.M.
  TITLE     Use of nucleic acids containing unmethylated CpG dinucleotide as an
            adjuvant
  JOURNAL   Patent: US 6406705-A 16 18-JUN-2002;
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="unknown"
BASE COUNT        6 a      6 c      5 g      3 t
ORIGIN

  Query Match             81.2%;  Score 13;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 1.2e+03;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          4 CTGGAGCGTTCTC 16
              |||||||||||||
Db         13 CTGGAGCGTTCTC 1


RESULT 8
AR222194/c
LOCUS       AR222194                  20 bp    DNA     linear   PAT 26-SEP-2002
DEFINITION  Sequence 19 from patent US 6429199.
ACCESSION   AR222194
VERSION     AR222194.1  GI:23329659
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 20)
  AUTHORS   Krieg,A.M. and Hartmann,G.
  TITLE     Immunostimulatory nucleic acid molecules for activating dendritic
            cells
  JOURNAL   Patent: US 6429199-A 19 06-AUG-2002;
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="unknown"
BASE COUNT        6 a      6 c      5 g      3 t
ORIGIN

  Query Match             81.2%;  Score 13;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 1.2e+03;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          4 CTGGAGCGTTCTC 16
              |||||||||||||
Db         13 CTGGAGCGTTCTC 1


RESULT 9
AX104390/c
LOCUS       AX104390                  20 bp    DNA     linear   PAT 30-APR-2001
DEFINITION  Sequence 582 from Patent WO0122972.
ACCESSION   AX104390
VERSION     AX104390.1  GI:13920587
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Krieg,A.M., Schetter,C. and Vollmer,J.C.
  TITLE     Immunostimulatory nucleic acids
  JOURNAL   Patent: WO 0122972-A 582 05-APR-2001;
            UNIVERSITY OF IOWA RESEARCH FOUNDATION (US) ; Coley Pharmaceutical
            GmbH (DE)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
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ORIGIN

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  Best Local Similarity   100.0%;  Pred. No. 1.2e+03;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          4 CTGGAGCGTTCTC 16
              |||||||||||||
Db         13 CTGGAGCGTTCTC 1


RESULT 10
AX104402/c
LOCUS       AX104402                  20 bp    DNA     linear   PAT 30-APR-2001
DEFINITION  Sequence 594 from Patent WO0122972.
```

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ACCESSION   AX104402
VERSION     AX104402.1  GI:13920599
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Krieg,A.M., Schetter,C. and Vollmer,J.C.
  TITLE     Immunostimulatory nucleic acids
  JOURNAL   Patent: WO 0122972-A 594 05-APR-2001;
            UNIVERSITY OF IOWA RESEARCH FOUNDATION (US) ; Coley Pharmaceutical
            GmbH (DE)
FEATURES             Location/Qualifiers
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                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
BASE COUNT        6 a      6 c      5 g      3 t
ORIGIN

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  Best Local Similarity   100.0%;  Pred. No. 1.2e+03;
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Qy          4 CTGGAGCGTTCTC 16
              |||||||||||||
Db         13 CTGGAGCGTTCTC 1


RESULT 11
AX104555/c
LOCUS       AX104555                  20 bp    DNA     linear   PAT 30-APR-2001
DEFINITION  Sequence 747 from Patent WO0122972.
ACCESSION   AX104555
VERSION     AX104555.1  GI:13920752
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Krieg,A.M., Schetter,C. and Vollmer,J.C.
  TITLE     Immunostimulatory nucleic acids
  JOURNAL   Patent: WO 0122972-A 747 05-APR-2001;
            UNIVERSITY OF IOWA RESEARCH FOUNDATION (US) ; Coley Pharmaceutical
            GmbH (DE)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
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                     /note="Biotin moiety attached at 5' end of sequence."
BASE COUNT        6 a      6 c      5 g      3 t
ORIGIN

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  Best Local Similarity   100.0%;  Pred. No. 1.2e+03;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          4 CTGGAGCGTTCTC 16
              |||||||||||||
Db         13 CTGGAGCGTTCTC 1


RESULT 12
AX105160/c
LOCUS       AX105160                  20 bp    DNA     linear   PAT 30-APR-2001
DEFINITION  Sequence 59 from Patent WO0122990.
ACCESSION   AX105160
VERSION     AX105160.1  GI:13921310
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Hartmann,G.D., Bratzler,R.L. and Krieg,A.U.
  TITLE     Methods related to immunostimulatory nucleic acid-induced
            interferon
  JOURNAL   Patent: WO 0122990-A 59 05-APR-2001;
            Coley Pharmaceutical Group, Inc. (US) ; UNIVERSITY OF IOWA RESEARCH
            FOUNDATION (US)
FEATURES             Location/Qualifiers
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ORIGIN

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Qy          4 CTGGAGCGTTCTC 16
              |||||||||||||
Db         13 CTGGAGCGTTCTC 1


RESULT 13
AX342397/c
LOCUS       AX342397                  20 bp    DNA     linear   PAT 12-JAN-2002
DEFINITION  Sequence 20 from Patent EP1167377.
ACCESSION   AX342397
VERSION     AX342397.1  GI:18151840
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Krieg,A.M.
  TITLE     Immunomodulatory oligonucleotides
  JOURNAL   Patent: EP 1167377-A 20 02-JAN-2002;
            THE UNIVERSITY OF IOWA RESEARCH FOUNDATION (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
BASE COUNT        6 a      6 c      5 g      3 t
ORIGIN

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  Best Local Similarity   100.0%;  Pred. No. 1.2e+03;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          4 CTGGAGCGTTCTC 16
              |||||||||||||
Db         13 CTGGAGCGTTCTC 1


RESULT 14
AX342424/c
LOCUS       AX342424                  20 bp    DNA     linear   PAT 12-JAN-2002
DEFINITION  Sequence 20 from Patent EP1167379.
ACCESSION   AX342424
VERSION     AX342424.1  GI:18151867
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Krieg,A.M.
  TITLE     Immunomodulatory oligonucleotides
  JOURNAL   Patent: EP 1167379-A 20 02-JAN-2002;
            UNIVERSITY OF IOWA RESEARCH FOUNDATION (US)
```

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FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
BASE COUNT        6 a      6 c      5 g      3 t
ORIGIN

  Query Match             81.2%;  Score 13;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 1.2e+03;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          4 CTGGAGCGTTCTC 16
              |||||||||||||
Db         13 CTGGAGCGTTCTC 1


RESULT 15
AX342457/c
LOCUS       AX342457                 20 bp    DNA     linear   PAT 12-JAN-2002
DEFINITION  Sequence 20 from Patent EP1167378.
ACCESSION   AX342457
VERSION     AX342457.1  GI:18151900
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Krieg,A.M.
  TITLE     Immunomodulatory oligonucleotides
  JOURNAL   Patent: EP 1167378-A 20 02-JAN-2002;
            UNIVERSITY OF IOWA RESEARCH FOUNDATION (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
BASE COUNT        6 a      6 c      5 g      3 t
ORIGIN

  Query Match             81.2%;  Score 13;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 1.2e+03;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          4 CTGGAGCGTTCTC 16
              |||||||||||||
Db         13 CTGGAGCGTTCTC 1


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GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

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Perfect score: 16
Sequence: 1 actctggagcgttctc 16

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Gapop 60.0 , Gapext 60.0

Searched: 2552756 seqs, 1349719017 residues

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Total number of hits satisfying chosen parameters: 3959256

Minimum DB seq length: 0
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
c 1	13	81.2	20	19	AAV27695	Immunostimulatory
c 2	13	81.2	20	20	AAZ41874	IL-12 secretion in
c 3	13	81.2	20	21	AAZ60948	Nucleotide sequenc
c 4	13	81.2	20	21	AAZ48853	B-cell stimulating
c 5	13	81.2	20	21	AAZ47618	Parasitic infectio
c 6	13	81.2	20	21	AAZ47823	Immunostimulatory
c 7	13	81.2	20	21	AAZ47950	Immune remodeling
c 8	13	81.2	20	22	AAH50597	Mouse B cell stimu
c 9	13	81.2	20	22	AAF98786	CpG immunostimulat
c 10	13	81.2	20	22	AAF99445	Immunostimulatory
c 11	13	81.2	20	22	AAF99457	Immunostimulatory
c 12	13	81.2	20	22	AAF99547	Immunostimulatory
c 13	13	81.2	20	22	AAD02980	Immunomodulatory a
c 14	13	81.2	20	22	AAH19280	CpG Oligonucleotid
c 15	13	81.2	20	24	ABS78098	Angiogenesis inhib
c 16	13	81.2	20	24	ABS78110	Angiogenesis inhib
c 17	13	81.2	20	24	ABS78263	Angiogenesis inhib
c 18	13	81.2	20	24	ABS70530	Dendritic cell sti
c 19	13	81.2	20	24	AAL39172	Murine Toll-like r
c 20	13	81.2	20	24	ABL35126	Immunostimulatory
c 21	13	81.2	20	24	ABL35190	Immunostimulatory
c 22	13	81.2	20	24	ABL35209	Immunostimulatory
c 23	13	81.2	20	24	ABL35210	Immunostimulatory
c 24	13	81.2	20	24	ABL35211	Immunostimulatory
c 25	13	81.2	20	24	ABL35232	Immunostimulatory
c 26	13	81.2	20	24	ABL35233	Immunostimulatory
c 27	13	81.2	20	24	ABL35234	Immunostimulatory
c 28	13	81.2	20	24	ABL35235	Immunostimulatory
c 29	13	81.2	20	24	ABL35256	Immunostimulatory
c 30	13	81.2	20	24	ABL35279	Immunostimulatory
c 31	13	81.2	20	24	ABL35506	Immunostimulatory
c 32	13	81.2	20	24	ABL38750	Immunostimulatory
c 33	13	81.2	20	24	ABL38879	Immunostimulatory
c 34	13	81.2	20	24	ABL38880	Immunostimulatory
c 35	13	81.2	20	25	ACA58670	Gastric ulcer trea
c 36	13	81.2	20	25	ABX89817	Cancer medicament
c 37	13	81.2	20	25	ABX76005	Immunostimulatory
c 38	13	81.2	21	24	ABL35378	Immunostimulatory
c 39	13	81.2	21	24	ABL35395	Immunostimulatory
c 40	13	81.2	22	24	ABL35414	Immunostimulatory
c 41	13	81.2	22	24	ABL35489	Immunostimulatory
c 42	13	81.2	24	24	ABL35300	Immunostimulatory
c 43	13	81.2	25	24	ABL35237	Immunostimulatory
c 44	13	81.2	26	24	ABL35114	Immunostimulatory
c 45	13	81.2	26	24	ABL35236	Immunostimulatory

ALIGNMENTS

RESULT 1
AAV27695/c
ID AAV27695 standard; DNA; 20 BP.
XX
AC AAV27695;
XX
DT 01-OCT-1998 (first entry)
XX
DE Immunostimulatory oligodeoxyribonucleotide 3Dg.
XX
KW Immunostimulatory; oligodeoxyribonucleotide; ODN;
KW unmethylated CpG dinucleotide; activate; lymphocyte; immune response;
KW Th2; Th1; cytokine; treatment; prevention; asthma; autoimmune disease;
KW desensitisation therapy; artificial adjuvant; antibody generation; ss.
XX
OS Synthetic.
XX
PN WO9818810-A1.
XX
PD 07-MAY-1998.
XX
PF 30-OCT-1997; 97WO-US19791.
XX
PR 30-OCT-1996; 96US-0738652.
XX
PA (IOWA) UNIV IOWA RES FOUND.
XX
PI Kline JN, Krieg AM;
XX
DR WPI; 1998-272127/24.
XX

PT New immunostimulatory nucleic acid molecules - which contain at
PT least one unmethylated CpG dinucleotide, used for treating e.g.
PT tumours, infections or autoimmune disease
XX
PS Disclosure; Page 27; 109pp; English.
XX
CC AAV27641-751 represent immunostimulatory oligodeoxyribonucleotides
CC (ODNs) of the invention. The ODNs contain at least one unmethylated CpG
CC dinucleotide, and have the formula:
CC 5' N1X1CGX2N2 3', where at least one nucleotide separates consecutive
CC CpGs, X1 is adenine, guanine, or thymine, X2 is cytosine or thymine, N
CC is any nucleotide and N1+N2 is 0-26 bases with the provision that N1 and
CC N2 does not contain a CCGG tetramer or more than one CCG or CGG trimer
CC OR 5' NX1X2CGX3X4N 3', where at least one nucleotide separates
CC consecutive CpGs, X1 and X2 are selected from GpT, GpG, GpA, ApT and ApA,
CC X3and X4 are selected from TpT or CpT, N is any nucleotide and N1+N2 is
CC 0-26 bases with the provision that N1 and N2 does not contain a CCGG
CC tetramer or more than one CCG or CGG trimer.
CC The ODNs activate lymphocytes in a subject and redirect a subject's
CC immune response from a Th2 to a Th1 (e.g. by inducing monocytic cells
CC and other cells to produce Th1 cytokines, including IL-12, IFN-gamma and
CC GM-CSF). The ODNs can be used to treat or prevent an asthmatic disorder,
CC autoimmune diseases, in desensitisation therapy, as an artificial
CC adjuvant during antibody generation in a mammal such as a mouse or a
CC human.
XX
SQ Sequence 20 BP; 6 A; 6 C; 5 G; 3 T; 0 other;

Query Match 81.2%; Score 13; DB 19; Length 20;
Best Local Similarity 100.0%; Pred. No. 1.8e+02;
Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 4 CTGGAGCGTTCTC 16
||||||||||||||
Db 13 CTGGAGCGTTCTC 1

RESULT 2
AAZ41874/c
ID AAZ41874 standard; DNA; 20 BP.
XX
AC AAZ41874;
XX
DT 24-JAN-2000 (first entry)
XX
DE IL-12 secretion inducing CpG oligonucleotide 19.
XX
KW CpG oligonucleotide; phosphorothioate; interleukin-12; IL-12; secretion;
KW human PBMC; immune response; cancer; HIV; bacterial disease; asthma;
KW neoplastic disorder; jaagsiekte; B cell; NK cell; ss; cytokine;
KW antigen presenting cell; infection; allergic disease.
XX
OS Synthetic.
XX
PN WO9951259-A2.
XX
PD 14-OCT-1999.
XX
PF 02-APR-1999; 99WO-US07335.
XX
PR 03-APR-1998; 98US-0080729.
XX
PA (IOWA) UNIV IOWA RES FOUND.
XX
PI Krieg AM, Weiner G;
XX
DR WPI; 1999-620169/53.
XX
PT Novel synergistic combinations of immunostimulatory oligonucleotides
PT and immunopotentiating cytokines are useful for stimulating the immune
PT system -
XX
PS Example 8; Page 71; 91pp; English.
XX
CC Sequences AAZ41856-Z41949 are phosphorothioate CpG oligonucleotides
CC which are used in the invention to induce interleukin-12 (IL-12)
CC secretion from human PBMC. The invention comprises stimulating an immune
CC response in a subject comprising administering to a subject exposed to an
CC antigen, an immunopotentiating cytokine and an immunostimulatory CpG
CC oligonucleotide to induce a synergistic antigen specific immune
CC response. The methods are useful for treating cancer by stimulating an
CC antigen specific immune response against a cancer antigen. The methods
CC can also be used to treat neoplastic disorders in humans, including but
CC not limited to: sarcoma, carcinoma, fibroma, Lymphoma, melanoma,
CC neuroblastoma, retinoblastoma, and glioma. The methods are also useful
CC for treating infectious diseases, e.g. viral diseases such as HIV,
CC bacterial diseases, and fungal diseases. The methods may also be used to
CC treat allergic diseases, e.g. asthma. The methods and compositions may
CC also be applied to treat cancer and tumours in non human subjects,
CC e.g. cats and dogs. Neoplasias affecting agricultural livestock may also
CC be treated and include leukaemia, haemangiopericytoma and bovine ocular
CC neoplasia. Chronic, infectious, contagious diseases of sheep and goats
CC caused by the bacterium Corynebacterium pseudotuberculosis, and
CC contagious lung tumour of sheep caused by jaagsiekte may also be
CC treated. CpG oligonucleotides can be useful in activating B cells, NK
CC cells, and antigen presenting cells, such as monocytes and macrophages.
CC CpG oligonucleotides enhance antibody dependent cellular cytotoxicity and
CC can be used as an adjuvant in conjunction with tumour antigens to
CC protect against a tumour challenge.
XX
SQ Sequence 20 BP; 6 A; 6 C; 5 G; 3 T; 0 other;

Query Match 81.2%; Score 13; DB 20; Length 20;
Best Local Similarity 100.0%; Pred. No. 1.8e+02;
Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 4 CTGGAGCGTTCTC 16
||||||||||||||
Db 13 CTGGAGCGTTCTC 1

RESULT 3
AAZ60948/c
ID AAZ60948 standard; DNA; 20 BP.
XX
AC AAZ60948;
XX
DT 30-MAY-2000 (first entry)
XX
DE Nucleotide sequence of an immunostimulatory CpG oligonucleotide.
XX
KW Immunostimulatory; stereoisomer; CpG oligonucleotide; Th2; Th1; asthma;
KW allergic reaction; allergen; cancer antigen; cancer; immunoinhibitory;
KW inflammatory disease; inflammatory bowel disease; autoimmune disease;
KW gingivitis; psoriasis; sepsis; ss.
XX
OS Synthetic.
XX
PN WO200006588-A1.
XX
PD 10-FEB-2000.
XX
PF 27-JUL-1999; 99WO-US17100.
XX
PR 27-JUL-1998; 98US-0094370.
XX
PA (IOWA) UNIV IOWA RES FOUND.
PA (CPGI-) CPG IMMUNOPHARMACEUTICALS INC.
XX
PI Krieg AM;
XX
DR WPI; 2000-195254/17.
XX
PT Immunostimulatory and immunoinhibitory stereoisomers of CpG
PT oligonucleotides useful for immunotherapy of cancer -
XX

PS Disclosure; Page 10; 88pp; English.
XX
CC AAZ60933-Z61015 represent immunostimulatory stereoisomers of CpG
CC oligonucleotides. The sequences are derived from generic nucleic
CC acid sequence, from which immunoinhibitory sequences may also be
CC derived. The immunostimulatory nucleic acids can be co-administered
CC with an antigen to induce an antigen-specific immune response. The
CC immunostimulatory nucleic acids can also be used in methods for
CC redirecting a subject's immune response from a Th2 to a Th1, for
CC treating asthma, for desensitising a subject against the occurrence
CC of an allergic reaction in response to contact with an allergen, for
CC activating an immune cell, especially a lymphocyte or a dendritic cell
CC expressing a cancer antigen or for treating cancer. The immunoinhibitory
CC nucleic acid can be used to prevent an immune response, especially where
CC the immune response in the subject is excessive due to having received
CC an immune stimulating compound. The immunoinhibitory nucleic acid can
CC be used to treat a subject having or at risk of an inflammatory disease,
CC especially inflammatory bowel disease, autoimmune disease, gingivitis,
CC psoriasis and sepsis.
XX
SQ Sequence 20 BP; 6 A; 6 C; 5 G; 3 T; 0 other;

Query Match 81.2%; Score 13; DB 21; Length 20;
Best Local Similarity 100.0%; Pred. No. 1.8e+02;
Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 4 CTGGAGCGTTCTC 16
||||||||||||
Db 13 CTGGAGCGTTCTC 1

RESULT 4
AAZ48853/c
ID AAZ48853 standard; DNA; 20 BP.
XX
AC AAZ48853;
XX
DT 24-MAR-2000 (first entry)
XX
DE B-cell stimulating oligonucleotide, ODN3Dg.
XX
KW B cell; stimulant; immune response; B cell activation; cancer; vaccine;
KW immunostimulatory molecule; infection; therapy; ss.
XX
OS Synthetic.
XX
PN US6008200-A.
XX
PD 28-DEC-1999.
XX
PF 07-FEB-1995; 95US-0386063.
XX
PR 15-JUL-1994; 94US-0276358.
XX
PA (IOWA) UNIV IOWA RES FOUND.
XX
PI Krieg AM;
XX
DR WPI; 2000-086224/07.
XX
PT Immunostimulatory oligonucleotides which enhance B cell activation
PT useful for treating an immune system deficiency e.g. cancer -
XX
PS Disclosure; Column 29; 19pp; English.
XX
CC This sequence represents a B cell stimulatory oligonucleotide. The
CC invention relates to compositions comprising an oligonucleotide (I) with
CC unmethylated guanine and cytosine nucleotides and an antigen in a
CC carrier. The oligonucleotides can be administered to a subject in a
CC composition with an antigen in a carrier to enhance an immune response by
CC enhancing B cell activation. The oligonucleotides are immunostimulatory
CC and can be used to treat, prevent or ameliorate an immune system
CC deficiency e.g. cancer or a viral, fungal, bacterial or parasitic
CC infection. They can also be administered as a vaccine adjuvant to
CC stimulate the response of a host to a vaccine. The compositions can be
CC used to treat humans or vertebrate animals including dogs, cats, sheep
CC pigs, cows, goats, chickens, mice and monkeys. Preceding chemotherapy
CC with the immunostimulatory oligonucleotides should be useful for
CC increasing the responsiveness of malignant cells to subsequent
CC chemotherapy. The 8-40 nucleotide size of the oligonucleotides
CC facilitates uptake into cells.
XX
SQ Sequence 20 BP; 6 A; 6 C; 5 G; 3 T; 0 other;

Query Match 81.2%; Score 13; DB 21; Length 20;
Best Local Similarity 100.0%; Pred. No. 1.8e+02;
Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 4 CTGGAGCGTTCTC 16
||||||||||||
Db 13 CTGGAGCGTTCTC 1

RESULT 5
AAZ47618/c
ID AAZ47618 standard; DNA; 20 BP.
XX
AC AAZ47618;
XX
DT 01-MAR-2000 (first entry)
XX
DE Parasitic infection preventing exemplary oligonucleotide SEQ ID NO:16.
XX
KW Immune system; immunostimulatory; parasitic infection; parasite;
KW CpG oligonucleotide; antigen presenting cell; natural killer cell;
KW granulocyte; malaria; helminth disease; tick; mite; ss.
XX
OS Synthetic.
XX
PN WO9956755-A1.
XX
PD 11-NOV-1999.
XX
PF 06-MAY-1999; 99WO-US09863.
XX
PR 06-MAY-1998; 98US-0084512.
XX
PA (IOWA) UNIV IOWA RES FOUND.
PA (OTTA-) OTTAWA CIVIC LOEB RES INST.
PA (USNA) US SEC OF NAVY.
XX
PI Gramzinski RA, Krieg AM, Davis HL, Hoffman SL;
XX
DR WPI; 2000-062123/05.
XX
PT Treating and preventing parasitic infections using CpG oligonucleotides
XX
PS Disclosure; Page 19; 74pp; English.
XX
CC The present invention describes a method for treating and preventing
CC parasitic infection by administration of unmethylated CpG
CC oligonucleotides. The CpG oligonucleotides are able to stimulate the
CC innate immune system via the activation of immune cells, such as antigen
CC presenting cells, natural killer cells and granulocytes. The CpG
CC oligonucleotides and the method can be used to treat and prevent
CC parasitic diseases, such as malaria, helminth diseases, tick and mites
CC in humans, animals and poultry. The oligonucleotides may be administered
CC in conjunction with parasiticides or other therapeutic compounds after
CC an organism has been diagnosed to be infected with parasites. Diseases
CC which can be treated or prevented include those caused by Plasmodium
CC falciparum, P. ovale, P. malariae, P. vivax, P. knowlesi, Babesia
CC microti, B. divergens, Trypanosoma cruzi, T. gambiense, T. rhodesiense,
CC Schistosoma mansoni, Toxoplasma gondii, Trichinella spiralis, Leishmania
CC major, L. donovani, L. braziliensis, and L. tropica. The parasite is
CC especially capable of causing malaria. The present sequence represents
CC a parasitic infection preventing exemplary oligonucleotide sequence from

CC the present invention.
XX
SQ Sequence 20 BP; 6 A; 6 C; 5 G; 3 T; 0 other;

Query Match 81.2%; Score 13; DB 21; Length 20;
Best Local Similarity 100.0%; Pred. No. 1.8e+02;
Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 4 CTGGAGCGTTCTC 16
||||||||||||||
Db 13 CTGGAGCGTTCTC 1

RESULT 6
AAZ47823/c
ID AAZ47823 standard; DNA; 20 BP.
XX
AC AAZ47823;
XX
DT 07-MAR-2000 (first entry)
XX
DE Immunostimulatory oligonucleotide sequence SEQ ID NO:16.
XX
KW Mucosal immunity; immunostimulatory; CpG motif; immune response;
KW antigen; allergic reaction; cancer; infectious disease; asthma; eczema;
KW allergic rhinitis; coryza; hay fever; conjunctivitis; bronchial asthma;
KW urticaria; food allergy; atopic condition; mucosal delivery; ss.
XX
OS Synthetic.
XX
PN WO9961056-A2.
XX
PD 02-DEC-1999.
XX
PF 21-MAY-1999; 99WO-US11359.
XX
PR 22-MAY-1998; 98US-0086393.
XX
PA (LOEB-) LOEB HEALTH RES INST AT OTTAWA HOSPITAL.
PA (CPGI-) CPG IMMUNOPHARMACEUTICALS INC.
XX
PI McCluskie MJ, Davis HL;
XX
DR WPI; 2000-062585/05.
XX
PT Use of CpG containing oligonucleotides as adjuvants for inducing an
PT immune response -
XX
PS Disclosure; Page 24; 116pp; English.
XX
CC The present invention describes a method using CpG containing
CC oligonucleotides (ONs) as adjuvants for inducing an immune response.
CC The method for inducing a mucosal immune response (MIR) comprises:
CC (1) administering to a mucosal surface of a subject an ON, having a
CC sequence including at least the formula (I); and (2) exposing the
CC subject to an antigen to induce the MIR, where the antigen is not
CC encoded in a nucleic acid vector: 5'X1X2CGX3X43' (I), where
CC C and G = unmethylated, and X1, X2, X3 and X4 = nucleotides. The method
CC can be used for treating a subject at risk of developing an allergic
CC reaction, cancer or infectious disease. It can be used for treating
CC asthmatic subjects, eczema, allergic rhinitis or coryza, hay fever,
CC conjunctivitis, bronchial asthma, urticaria, food allergies or other
CC atopic conditions. The antigen may be derived from infectious organisms
CC such as infectious bacteria, viruses, parasites or fungi. It can be used
CC in humans or animals, e.g. bovine, equine, feline, swine, aquatic or
CC avian species. The ONs act as potent mucosal adjuvants to induce immune
CC responses at both local and remote sites against an antigen
CC administered to the mucosal tissue. Both systemic and mucosal immunity
CC are induced by mucosal delivery of the ONs. AAZ47808 to AAZ47891
CC represent examples of immunostimulatory oligonucleotides given in the
CC present invention.
XX
SQ Sequence 20 BP; 6 A; 6 C; 5 G; 3 T; 0 other;

Query Match 81.2%; Score 13; DB 21; Length 20;
Best Local Similarity 100.0%; Pred. No. 1.8e+02;
Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 4 CTGGAGCGTTCTC 16
||||||||||||||
Db 13 CTGGAGCGTTCTC 1

RESULT 7
AAZ47950/c
ID AAZ47950 standard; DNA; 20 BP.
XX
AC AAZ47950;
XX
DT 08-MAR-2000 (first entry)
XX
DE Immune remodeling inducing CpG oligonucleotide SEQ ID NO:19.
XX
KW Haematopoiesis; regulation; CpG oligonucleotide; phosphorothioate;
KW immune remodeling; thrombopoiesis; anaemia; immune system; cancer;
KW immune response; allergic reaction; infectious disease; asthma;
KW thrombocytopaenia; immunohaemolytic disorder; genetic disorder;
KW haemoglobinopathy; kidney failure; chronic inflammatory disorder;
KW rheumatoid arthritis; ss.
XX
OS Synthetic.
XX
PN WO9958118-A2.
XX
PD 18-NOV-1999.
XX
PF 14-MAY-1999; 99WO-IB01285.
XX
PR 14-MAY-1998; 98US-0085516.
PR 02-FEB-1999; 99US-0241653.
XX
PA (CPGI-) CPG IMMUNOPHARMACEUTICALS GMBH.
PA (CPGI-) CPG IMMUNOPHARMACEUTICALS INC.
XX
PI Wagner H, Lipford G;
XX
DR WPI; 2000-062261/05.
XX
PT Use of CpG containing oligonucleotides for, e.g. inducing an
PT antigen-specific immune response -
XX
PS Example 1; Page 65; 116pp; English.
XX
CC The present invention describes a method using CpG containing
CC oligonucleotides (ONs) for regulating immune system remodeling and for
CC regulating haematopoiesis. The method for inducing an antigen-specific
CC immune response comprises: (1) administering an ON having a sequence
CC including at least the formula (I); and (2) exposing the subject to an
CC antigen at least 3 days after the ON is administered to the subject to
CC produce an antigen-specific immune response: 5' X1CGX2 3' (I), where
CC the ON = includes at least 8 nucleotides; C and G = unmethylated, and
CC X1 and X2 = nucleotides. The method can be used for inducing an immune
CC response against an antigen such as cells, cell extracts, proteins,
CC polysaccharides, polysaccharide conjugates, lipids, glycolipids,
CC carbohydrate, viral extracts, viruses, bacteria, fungi, parasites and
CC allergens. It can be used in a subject at risk of developing cancer or
CC an allergic reaction. It can also be used for treating an infectious
CC disease, allergic diseases and asthma, as well as thrombocytopaenia
CC which is drug-induced, due to an autoimmune disorder such as idiopathic
CC thrombocytopenic purpura, or resulting from accidental or therapeutic
CC radiation exposure. It can also be used for treating anaemia such as
CC drug-induced anaemia, immunohaemolytic disorder, genetic disorders such
CC as haemoglobinopathy and inherited haemolytic anaemia, inadequate
CC production despite adequate iron stores, chronic disease such as kidney
CC failure, and chronic inflammatory disorder such as rheumatoid arthritis,
CC or anaemia resulting from accidental or therapeutic radiation exposure.

```
CC   AAZ47932 to AAZ48029 represent phosphorothioate CpG oligonucleotides
CC   used in the exemplification of the present invention.
XX
SQ   Sequence 20 BP; 6 A; 6 C; 5 G; 3 T; 0 other;

  Query Match             81.2%;  Score 13;  DB 21;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 1.8e+02;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          4 CTGGAGCGTTCTC 16
              |||||||||||||
Db         13 CTGGAGCGTTCTC 1


RESULT 8
AAH50597/c
ID   AAH50597 standard; DNA; 20 BP.
XX
AC   AAH50597;
XX
DT   22-AUG-2001  (first entry)
XX
DE   Mouse B cell stimulatory oligonucleotide SEQ ID NO:27.
XX
KW   Immunostimulatory; inducing; natural killer cell; lytic activity;
KW   unmethylated CpG dinucleotide; immune response; B cell proliferation;
KW   Th1; immune activation; interleukin 6; IL-6; interferon gamma;
KW   IFN-gamma; cytokine; ss.
XX
OS   Mus sp.
OS   Synthetic.
XX
PN   US6239116-B1.
XX
PD   29-MAY-2001.
XX
PF   30-OCT-1997;   97US-0960774.
XX
PR   30-OCT-1996;   96US-0738652.
XX
PA   (IOWA ) UNIV IOWA RES FOUND.
PA   (COLE-) COLEY PHARM GROUP INC.
PA   (USSH ) US DEPT HEALTH & HUMAN SERVICES.
XX
PI   Krieg AM,  Kline JN;
XX
DR   WPI; 2001-380456/40.
XX
PT   Methods for inducing Il-6, interferon-gamma or Il-12, or stimulating
PT   natural killer cell lytic activity in a human, comprise administering
PT   to the subject or exposing a natural killer cell to immunostimulatory
PT   nucleic acids  -
XX
PS   Disclosure; Column 17; 74pp; English.
XX
CC   The present invention describes methods for inducing interleukin 6
CC   (IL-6), interferon-gamma (IFN-gamma) or IL-12, or for stimulating
CC   natural killer cell lytic activity. The methods comprise administering
CC   to the subject or exposing a natural killer cell to an immunostimulatory
CC   nucleic acid. Also described are: (1) inducing IL-6 in a subject
CC   comprising administering to the subject to induce IL-6 in the subject
CC   the immunostimulatory nucleic acid; (2) stimulating natural killer cell
CC   lytic activity comprising exposing a natural killer cell to the
CC   immunostimulatory nucleic acid to stimulate natural killer cell lytic
CC   activity; (3) inducing interferon-gamma in a subject to treat an immune
CC   system deficiency comprising administering to the subject to induce
CC   interferon-gamma production, the immunostimulatory nucleic acid; and
CC   (4) inducing IL-12 in a subject comprising administering to the subject
CC   the immunostimulatory nucleic acid. The methods are useful for inducing
CC   IL-6, interferon-gamma or IL-12, or stimulating natural killer cell
CC   lytic activity in a subject, particularly a human. The methods are
CC   particularly useful for modulating an immune response. AAH50571 to
CC   AAH50671 represent oligonucleotide sequences used in the exemplification
CC   of the present invention.
XX
SQ   Sequence 20 BP; 6 A; 6 C; 5 G; 3 T; 0 other;

  Query Match             81.2%;  Score 13;  DB 22;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 1.8e+02;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          4 CTGGAGCGTTCTC 16
              |||||||||||||
Db         13 CTGGAGCGTTCTC 1


RESULT 9
AAF98786/c
ID   AAF98786 standard; DNA; 20 BP.
XX
AC   AAF98786;
XX
DT   11-JUN-2001  (first entry)
XX
DE   CpG immunostimulatory nucleic acid SEQ ID NO: 59.
XX
KW   Immunostimulatory nucleic acid; ISNA; human; interferon alpha; IFN-alpha;
KW   viral infection; phosphorothioate backbone; palindrome; cancer; ds.
XX
OS   Synthetic.
XX
PN   WO200122990-A2.
XX
PD   05-APR-2001.
XX
PF   27-SEP-2000; 2000WO-US26527.
XX
PR   27-SEP-1999;   99US-0156147.
XX
PA   (COLE-) COLEY PHARM GROUP INC.
PA   (IOWA ) UNIV IOWA RES FOUND.
XX
PI   Hartmann G,  Bratzler RL,  Krieg A;
XX
DR   WPI; 2001-290487/30.
XX
PT   Improving the efficacy of treatments involving the administration of
PT   interferon-alpha by co-administering an isolated immunostimulatory
PT   nucleic acid -
XX
PS   Disclosure; Page 21; 168pp; English.
XX
CC   The present invention describes an improvement to a method requiring the
CC   administration of interferon alpha (IFN-alpha), involving administering
CC   an immunostimulatory nucleic acid (ISNA). The sequences of a number of
CC   such nucleic acids are also provided. These may comprise oligonucleotides
CC   with phosphorothioate backbones, palindromes, or G-rich sequences. The
CC   sequences of the invention are useful in the treatment of proliferative
CC   diseases, such as cancers, and viral infections. The present sequence is
CC   an example of an immunostimulatory oligonucleotide.
XX
SQ   Sequence 20 BP; 6 A; 6 C; 5 G; 3 T; 0 other;

  Query Match             81.2%;  Score 13;  DB 22;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 1.8e+02;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          4 CTGGAGCGTTCTC 16
              |||||||||||||
Db         13 CTGGAGCGTTCTC 1


RESULT 10
AAF99445/c
ID   AAF99445 standard; DNA; 20 BP.
XX
```

AC AAF99445;
XX
DT 12-JUN-2001 (first entry)
XX
DE Immunostimulatory nucleic acid #561.
XX
KW Vaccine; cytostatic; virucidal; bactericidal; fungicidal; anti-parasitic;
KW immunostimulatory; tumour; viral infection; bacterial infection;
KW fungal infection; parasitic infection; cancer; asthma;
KW infectious disease; allergy; immune deficiency; phosphorothioate; ss.
XX
OS Synthetic.
XX
PN WO200122972-A2.
XX
PD 05-APR-2001.
XX
PF 25-SEP-2000; 2000WO-US26383.
XX
PR 25-SEP-1999; 99US-0156113.
PR 27-SEP-1999; 99US-0156135.
PR 23-AUG-2000; 2000US-0227436.
XX
PA (IOWA) UNIV IOWA RES FOUND.
PA (COLE-) COLEY PHARM GMBH.
XX
PI Krieg AM, Schetter C, Vollmer J;
XX
DR WPI; 2001-273485/28.
XX
PT Vaccinating against tumors, infectious diseases, allergies and asthma
PT using immunostimulatory Py-rich and TG nucleic acids -
XX
PS Claim 101; Page 49; 338pp; English.
XX
CC The present invention relates to a method for stimulating an immune
CC response. The method comprises administering an immunostimulatory nucleic
CC acid to a non-rodent subject in sufficient quantity to stimulate an
CC immune response. The present sequence is one such immunostimulatory
CC nucleic acid. The immunostimulatory nucleic acids can be pyrimidine rich
CC (py-rich) or thymidine (T) rich. The method is used to vaccinate subjects
CC against tumour antigens, viral antigens (e.g. herpesviridae, retroviridae
CC and/or orthomyxoviridae), bacterial antigens (e.g. toxoplasma,
CC haemophilus, campylobacter, clostridium, Escherichia coli and/or
CC staphylococcus), fungal antigens and/or parasitic antigens. The method is
CC also useful for preventing cancer, asthma, infectious disease, allergy or
CC immune deficiency. The present sequence can also be used to redirect a
CC Th2 to a Th1 immune response and to activate immune cells.
CC Note: the present sequence may have a phosphorothioate backbone.
XX
SQ Sequence 20 BP; 5 A; 6 C; 5 G; 4 T; 0 other;

Query Match 81.2%; Score 13; DB 22; Length 20;
Best Local Similarity 100.0%; Pred. No. 1.8e+02;
Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 4 CTGGAGCGTTCTC 16
||||||||||||
Db 13 CTGGAGCGTTCTC 1

RESULT 11
AAF99457/c
ID AAF99457 standard; DNA; 20 BP.
XX
AC AAF99457;
XX
DT 12-JUN-2001 (first entry)
XX
DE Immunostimulatory nucleic acid #573.
XX
KW Vaccine; cytostatic; virucidal; bactericidal; fungicidal; anti-parasitic;
KW immunostimulatory; tumour; viral infection; bacterial infection;
KW fungal infection; parasitic infection; cancer; asthma;
KW infectious disease; allergy; immune deficiency; phosphorothioate; ss.
XX
OS Synthetic.
XX
PN WO200122972-A2.
XX
PD 05-APR-2001.
XX
PF 25-SEP-2000; 2000WO-US26383.
XX
PR 25-SEP-1999; 99US-0156113.
PR 27-SEP-1999; 99US-0156135.
PR 23-AUG-2000; 2000US-0227436.
XX
PA (IOWA) UNIV IOWA RES FOUND.
PA (COLE-) COLEY PHARM GMBH.
XX
PI Krieg AM, Schetter C, Vollmer J;
XX
DR WPI; 2001-273485/28.
XX
PT Vaccinating against tumors, infectious diseases, allergies and asthma
PT using immunostimulatory Py-rich and TG nucleic acids -
XX
PS Claim 101; Page 50; 338pp; English.
XX
CC The present invention relates to a method for stimulating an immune
CC response. The method comprises administering an immunostimulatory nucleic
CC acid to a non-rodent subject in sufficient quantity to stimulate an
CC immune response. The present sequence is one such immunostimulatory
CC nucleic acid. The immunostimulatory nucleic acids can be pyrimidine rich
CC (py-rich) or thymidine (T) rich. The method is used to vaccinate subjects
CC against tumour antigens, viral antigens (e.g. herpesviridae, retroviridae
CC and/or orthomyxoviridae), bacterial antigens (e.g. toxoplasma,
CC haemophilus, campylobacter, clostridium, Escherichia coli and/or
CC staphylococcus), fungal antigens and/or parasitic antigens. The method is
CC also useful for preventing cancer, asthma, infectious disease, allergy or
CC immune deficiency. The present sequence can also be used to redirect a
CC Th2 to a Th1 immune response and to activate immune cells.
CC Note: the present sequence may have a phosphorothioate backbone.
XX
SQ Sequence 20 BP; 6 A; 6 C; 5 G; 3 T; 0 other;

Query Match 81.2%; Score 13; DB 22; Length 20;
Best Local Similarity 100.0%; Pred. No. 1.8e+02;
Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 4 CTGGAGCGTTCTC 16
||||||||||||
Db 13 CTGGAGCGTTCTC 1

RESULT 12
AAF99547/c
ID AAF99547 standard; DNA; 20 BP.
XX
AC AAF99547;
XX
DT 12-JUN-2001 (first entry)
XX
DE Immunostimulatory nucleic acid #663.
XX
KW Vaccine; cytostatic; virucidal; bactericidal; fungicidal; anti-parasitic;
KW immunostimulatory; tumour; viral infection; bacterial infection;
KW fungal infection; parasitic infection; cancer; asthma;
KW infectious disease; allergy; immune deficiency; phosphorothioate; ss.
XX
OS Synthetic.
XX
PN WO200122972-A2.
XX
PD 05-APR-2001.

```
XX
PF   25-SEP-2000; 2000WO-US26383.
XX
PR   25-SEP-1999;   99US-0156113.
PR   27-SEP-1999;   99US-0156135.
PR   23-AUG-2000; 2000US-0227436.
XX
PA   (IOWA ) UNIV IOWA RES FOUND.
PA   (COLE-) COLEY PHARM GMBH.
XX
PI   Krieg AM,  Schetter C,  Vollmer J;
XX
DR   WPI; 2001-273485/28.
XX
PT   Vaccinating against tumors, infectious diseases, allergies and asthma
PT   using immunostimulatory Py-rich and TG nucleic acids -
XX
PS   Claim 101; Page 53; 338pp; English.
XX
CC   The present invention relates to a method for stimulating an immune
CC   response. The method comprises administering an immunostimulatory nucleic
CC   acid to a non-rodent subject in sufficient quantity to stimulate an
CC   immune response. The present sequence is one such immunostimulatory
CC   nucleic acid. The immunostimulatory nucleic acids can be pyrimidine rich
CC   (py-rich) or thymidine (T) rich. The method is used to vaccinate subjects
CC   against tumour antigens, viral antigens (e.g. herpesviridae, retroviridae
CC   and/or orthomyxoviridae), bacterial antigens (e.g. toxoplasma,
CC   haemophilus, campylobacter, clostridium, Escherichia coli and/or
CC   staphylococcus), fungal antigens and/or parasitic antigens. The method is
CC   also useful for preventing cancer, asthma, infectious disease, allergy or
CC   immune deficiency. The present sequence can also be used to redirect a
CC   Th2 to a Th1 immune response and to activate immune cells.
CC   Note: the present sequence may have a phosphorothioate backbone.
XX
SQ   Sequence 20 BP; 6 A; 6 C; 5 G; 3 T; 0 other;

  Query Match             81.2%;  Score 13;  DB 22;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 1.8e+02;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          4 CTGGAGCGTTCTC 16
              |||||||||||||
Db         13 CTGGAGCGTTCTC 1


RESULT 13
AAD02980/c
ID   AAD02980 standard; DNA; 20 BP.
XX
AC   AAD02980;
XX
DT   31-MAY-2001  (first entry)
XX
DE   Immunomodulatory antisense oligodeoxyribonucleotide (ODN) 3Dg mutant.
XX
KW   Oligodeoxyribonucleotide; ODN; cytosine-guanine dinucleotide; CpG;
KW   immunostimulatory; therapy; immune system deficiency; tumour; cancer;
KW   antibacterial; antiparasitic; fungicide; antiviral; cytostatic;
KW   leukaemia; systemic lupus erythematosus; sepsis; autoimmune disease;
KW   immunoinhibitory; immunoglobulin M; IgM; antisense; mutant; ss.
XX
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   mutation        replace (10, G)
FT                   /*tag=  a
FT   mutation        replace (11, G)
FT                   /*tag=  b
FT   mutation        replace (13, C)
FT                   /*tag=  c
FT   mutation        replace (15, T)
FT                   /*tag=  d
FT   mutation        replace (16, T)
FT                   /*tag=  e
FT   mutation        replace (17, C)
FT                   /*tag=  f
FT   mutation        replace (18, C)
FT                   /*tag=  g
XX
PN   US6194388-B1.
XX
PD   27-FEB-2001.
XX
PF   07-FEB-1995;   95US-0386063.
XX
PR   15-JUL-1994;   94US-0276358.
XX
PA   (IOWA ) UNIV IOWA RES FOUND.
PA   (COLE-) COLEY PHARM GROUP.
XX
PI   Krieg AM,  Klinman D,  Steinberg AD;
XX
DR   WPI; 2001-217934/22.
XX
PT   Immunostimulatory composition useful for stimulating immune response in
PT   a subject, comprises antigen and immunostimulatory nucleic acid
PT   comprising oligonucleotides having unmethylated cytosine-guanine
PT   dinucleotides -
XX
PS   Disclosure; Column 31-32; 20pp; English.
XX
CC   The present invention relates to immunomodulatory
CC   oligodeoxyribonucleotides (ODNs) containing methylated or unmethylated
CC   cytosine-guanine (CpG) dinucleotides. Immunostimulatory ODN compositions
CC   having unmethylated CpG dinucleotides are useful for activating
CC   lymphocytes and for treating, preventing or ameliorating an immune system
CC   deficiency e.g. tumour or cancer or viral, fungal, bacterial or parasitic
CC   infection and leukaemia. Neural ODN that contains a methylated CpG
CC   dinucleotide are useful for treating diseases such as systemic lupus
CC   erythematosus, sepsis and autoimmune diseases. Immunoinhibitory ODN
CC   containing CpG dinucleotides that are not in the stimulatory motif and
CC   GCG trinucleotide sequences at or near both termini have antiviral
CC   activity. The present sequence is an immunomodulatory antisense
CC   oligodeoxyribonucleotide (ODN) 3Dg mutant. This is used to
CC   determine whether CpG or non-CpG ODNs causes B cell activation
CC   and immunoglobulin M (IgM) secretion.
XX
SQ   Sequence 20 BP; 6 A; 6 C; 5 G; 3 T; 0 other;

  Query Match             81.2%;  Score 13;  DB 22;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 1.8e+02;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          4 CTGGAGCGTTCTC 16
              |||||||||||||
Db         13 CTGGAGCGTTCTC 1


RESULT 14
AAH19280/c
ID   AAH19280 standard; DNA; 20 BP.
XX
AC   AAH19280;
XX
DT   13-JUL-2001  (first entry)
XX
DE   CpG Oligonucleotide #16 used to stimulate mouse B cells.
XX
KW   Immunostimulant; antiallergic; cytostatic; antiasthmatic; vaccine;
KW   gene therapy; CpG; immune system deficiency; tumour; cancer; infection;
KW   leukaemia; ss.
XX
OS   Synthetic.
XX
PN   US6207646-B1.
XX
```

PD 27-MAR-2001.
XX
PF 30-OCT-1996; 96US-0738652.
XX
PR 07-FEB-1995; 95US-0386063.
PR 15-JUL-1994; 94US-0276358.
XX
PA (IOWA) UNIV IOWA RES FOUND.
PA (COLE-) COLEY PHARM GROUP INC.
PA (USSH) US DEPT HEALTH & HUMAN SERVICES.
XX
PI Krieg AM, Kline J, Klinman D, Steinberg AD;
XX
DR WPI; 2001-280761/29.
XX
PT Compositions comprising immunostimulatory molecules which comprise
PT unmethylated CpG dinucleotides useful for ameliorating immune system
PT deficiency, treating leukemia and desensitizing subject against
PT allergic response -
XX
PS Disclosure; Columns 15-16; 55pp; English.
XX
CC The present invention relates to a composition comprising an isolated
CC immunostimulatory nucleic acid which comprises unmethylated
CC cytosine-guanine (CpG) dinucleotides and an antigen in a carrier. The
CC present sequence is an oligonucleotide, which was used in the present
CC invention. The immunostimulatory nucleic acids are useful for
CC ameliorating an immune system deficiency (the presence of tumour, cancer
CC or infectious agent) in a subject. The immunostimulatory nucleic acids
CC are also useful for desensitising a subject against the occurrence of an
CC allergic reaction in response to contact with a particular allergen.
CC The immunostimulatory nucleic acids are also useful for vaccination and
CC for treating leukaemia in a subject on administration prior to or in
CC conjunction with a chemotherapy, so that the subject's leukaemia cells
CC are more sensitive to chemotherapy. The compositions are useful for
CC inducing an antigen specific immune response in the subject. The
CC compositions can be also used to treat or prevent the symptoms of asthma.
XX
SQ Sequence 20 BP; 6 A; 6 C; 5 G; 3 T; 0 other;

Query Match 81.2%; Score 13; DB 22; Length 20;
Best Local Similarity 100.0%; Pred. No. 1.8e+02;
Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 4 CTGGAGCGTTCTC 16
||||||||||||
Db 13 CTGGAGCGTTCTC 1

RESULT 15
ABS78098/c
ID ABS78098 standard; DNA; 20 BP.
XX
AC ABS78098;
XX
DT 13-DEC-2002 (first entry)
XX
DE Angiogenesis inhibitory oligonucleotide #582.
XX
KW Angiogenesis inhibitor; ss; angiogenesis; solid tumour growth;
KW tumour metastasis; precancerous lesion; rheumatoid arthritis;
KW psoriasis; diabetic retinopathy; retinopathy of prematurity;
KW macular degeneration; corneal graft rejection; neovascular glaucoma;
KW retrolental fibroplasia; rubeosis; Osler-Webber Syndrome;
KW myocardial angiogenesis; plaque neovascularisation; telangiectasia;
KW haemophiliac joint; angiofibroma; wound granulation;
KW intestinal adhesion; atherosclerosis; scleroderma; hypertrophic scar.
XX
OS Synthetic.
XX
PN WO200253141-A2.
XX
PD 11-JUL-2002.
XX
PF 14-DEC-2001; 2001WO-US48458.
XX
PR 14-DEC-2000; 2000US-255534P.
XX
PA (COLE-) COLEY PHARM GROUP INC.
XX
PI Bratzler RL;
XX
DR WPI; 2002-566690/60.
XX
PT Inhibiting angiogenesis in a subject, involves administering at least
PT one antiangiogenic nucleic acid molecule to the subject -
XX
PS Claim 2; Page 29; 276pp; English.
XX
CC The invention relates to inhibiting angiogenesis in a subject, comprising
CC administering at least one antiangiogenic nucleic acid molecule.
CC Also included is a kit comprising a first container housing the
CC antiangiogenic nucleic acids, and instructions for administering them to
CC a subject having a condition characterised by unwanted angiogenesis.
CC The method is useful for inhibiting angiogenesis associated with solid
CC tumour growth, tumour metastasis, precancerous lesion, rheumatoid
CC arthritis, psoriasis, diabetic retinopathy, retinopathy of prematurity,
CC macular degeneration, corneal graft rejection, neovascular glaucoma,
CC retrolental fibroplasia, rubeosis, Osler-Webber Syndrome, myocardial
CC angiogenesis, plaque neovascularisation, telangiectasia, haemophiliac
CC joints, angiofibroma, wound granulation, intestinal adhesions,
CC atherosclerosis, scleroderma and hypertrophic scars. The present
CC sequence is an antiangiogenic nucleic acid of the invention.
XX
SQ Sequence 20 BP; 5 A; 6 C; 5 G; 4 T; 0 other;

Query Match 81.2%; Score 13; DB 24; Length 20;
Best Local Similarity 100.0%; Pred. No. 1.8e+02;
Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 4 CTGGAGCGTTCTC 16
||||||||||||
Db 13 CTGGAGCGTTCTC 1

Search completed: January 20, 2004, 18:51:36
Job time : 100.588 secs

GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: January 20, 2004, 17:24:48 ; Search time 25.1765 Seconds
(without alignments)
280.505 Million cell updates/sec

Title: US-10-068-160-73
Perfect score: 16
Sequence: 1 actctggagcgttctc 16

Scoring table: OLIGO_NUC
Gapop 60.0 , Gapext 60.0

Searched: 569978 seqs, 220691566 residues

Word size : 0

Total number of hits satisfying chosen parameters: 955846

Minimum DB seq length: 0
Maximum DB seq length: 500

Post-processing: Listing first 45 summaries

Database : Issued_Patents_NA:*
1: /cgn2_6/ptodata/2/ina/5A_COMB.seq:*
2: /cgn2_6/ptodata/2/ina/5B_COMB.seq:*
3: /cgn2_6/ptodata/2/ina/6A_COMB.seq:*
4: /cgn2_6/ptodata/2/ina/6B_COMB.seq:*
5: /cgn2_6/ptodata/2/ina/PCTUS_COMB.seq:*
6: /cgn2_6/ptodata/2/ina/backfiles1.seq:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.		Score	% Query Match	Length	DB	ID	Description
c	1	13	81.2	20	3	US-08-386-063-20	Sequence 20, Appl
c	2	13	81.2	20	3	US-08-386-063-20	Sequence 20, Appl
c	3	13	81.2	20	3	US-08-738-652-30	Sequence 30, Appl
c	4	13	81.2	20	3	US-09-286-098-19	Sequence 19, Appl
c	5	13	81.2	20	3	US-08-960-774-27	Sequence 27, Appl
c	6	13	81.2	20	4	US-09-325-193A-16	Sequence 16, Appl
c	7	13	81.2	20	4	US-09-191-170-19	Sequence 19, Appl
c	8	13	81.2	439	4	US-09-397-787-308	Sequence 308, App
	9	12	75.0	81	1	US-08-238-863-22	Sequence 22, Appl
	10	12	75.0	81	1	US-08-238-863-45	Sequence 45, Appl
	11	12	75.0	81	1	US-08-443-407-22	Sequence 22, Appl
	12	12	75.0	81	1	US-08-443-407-45	Sequence 45, Appl
	13	12	75.0	81	5	PCT-US95-05600-166	Sequence 166, App
	14	12	75.0	81	5	PCT-US95-05600-189	Sequence 189, App
	15	12	75.0	490	5	PCT-US95-08295-23	Sequence 23, Appl
c	16	11	68.8	20	4	US-09-052-469-12	Sequence 12, Appl
c	17	11	68.8	20	4	US-08-422-582-12	Sequence 12, Appl
c	18	11	68.8	27	2	US-08-859-998-640	Sequence 640, App
c	19	11	68.8	27	4	US-09-225-928-640	Sequence 640, App
c	20	11	68.8	27	4	US-09-225-201B-640	Sequence 640, App
c	21	11	68.8	90	4	US-09-364-707A-16	Sequence 16, Appl
	22	11	68.8	234	3	US-09-189-060B-54	Sequence 54, Appl
	23	11	68.8	236	4	US-09-177-650-113	Sequence 113, App
	24	11	68.8	248	3	US-08-621-018B-37	Sequence 37, Appl
	25	11	68.8	248	4	US-09-483-665-37	Sequence 37, Appl
	26	11	68.8	284	3	US-09-296-284-74	Sequence 74, Appl
	27	11	68.8	317	3	US-08-513-974B-305	Sequence 305, App
	28	11	68.8	318	3	US-08-513-974B-304	Sequence 304, App
	29	11	68.8	334	3	US-09-296-284-73	Sequence 73, Appl
	30	11	68.8	384	3	US-09-296-284-72	Sequence 72, Appl
c	31	11	68.8	387	1	US-08-592-126-121	Sequence 121, App
c	32	11	68.8	387	4	US-09-168-595-121	Sequence 121, App
c	33	11	68.8	429	4	US-09-252-991A-7102	Sequence 7102, Ap
	34	11	68.8	434	3	US-09-296-284-71	Sequence 71, Appl
	35	11	68.8	471	4	US-09-252-991A-4400	Sequence 4400, Ap
c	36	11	68.8	474	4	US-09-221-017B-394	Sequence 394, App
	37	11	68.8	484	3	US-09-296-284-70	Sequence 70, Appl
c	38	11	68.8	497	4	US-09-484-970B-76	Sequence 76, Appl
c	39	10	62.5	16	3	US-08-073-985-2	Sequence 2, Appli
	40	10	62.5	18	1	US-08-635-309-13	Sequence 13, Appl
	41	10	62.5	20	2	US-08-892-770-8	Sequence 8, Appli
	42	10	62.5	20	3	US-08-386-063-8	Sequence 8, Appli
	43	10	62.5	20	3	US-08-386-063-10	Sequence 10, Appl
c	44	10	62.5	20	3	US-08-386-063-14	Sequence 14, Appl
c	45	10	62.5	20	3	US-08-386-063-15	Sequence 15, Appl

ALIGNMENTS

RESULT 1
US-08-386-063-20/c
; Sequence 20, Application US/08386063
; Patent No. 6008200
; GENERAL INFORMATION:
; APPLICANT: Arthur M. Krieg, M.D.
; TITLE OF INVENTION: IMMUNOMODULATORY OLIGONUCLEOTIDES
; NUMBER OF SEQUENCES: 27
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: LAHIVE & COCKFIELD
; STREET: 60 STATE STREET, SUITE 510
; CITY: BOSTON
; STATE: MASSACHUSETTS
; COUNTRY: USA
; ZIP: 02109-1875
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: ASCII text
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/386,063
; FILING DATE:
; CLASSIFICATION: 424
; ATTORNEY/AGENT INFORMATION:
; NAME: ARNOLD, BETH E.
; REGISTRATION NUMBER: 35,430
; REFERENCE/DOCKET NUMBER: UIZ-013CP
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (617)227-7400
; TELEFAX: (617)227-5941
; INFORMATION FOR SEQ ID NO: 20:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 20 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: DNA
US-08-386-063-20

Query Match 81.2%; Score 13; DB 3; Length 20;
Best Local Similarity 100.0%; Pred. No. 17;
Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          4 CTGGAGCGTTCTC 16
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Db         13 CTGGAGCGTTCTC 1
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RESULT 2

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US-08-386-063-20/c
; Sequence 20, Application US/08386063
; Patent No. 6194388
;  GENERAL INFORMATION:
;    APPLICANT:  Arthur M. Krieg, M.D.
;    TITLE OF INVENTION:  IMMUNOMODULATORY OLIGONUCLEOTIDES
;    NUMBER OF SEQUENCES:  27
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  LAHIVE & COCKFIELD
;      STREET:  60 STATE STREET, SUITE 510
;      CITY:  BOSTON
;      STATE:  MASSACHUSETTS
;      COUNTRY:  USA
;      ZIP:  02109-1875
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  ASCII text
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/386,063
;      FILING DATE:
;      CLASSIFICATION:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  ARNOLD, BETH E.
;      REGISTRATION NUMBER:  35,430
;      REFERENCE/DOCKET NUMBER:  UIZ-013CP
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (617)227-7400
;      TELEFAX:  (617)227-5941
;  INFORMATION FOR SEQ ID NO:  20:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  20 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  DNA
US-08-386-063-20

  Query Match             81.2%;  Score 13;  DB 3;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 17;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          4 CTGGAGCGTTCTC 16
              |||||||||||||
Db         13 CTGGAGCGTTCTC 1


RESULT 3
US-08-738-652-30/c
; Sequence 30, Application US/08738652B
; Patent No. 6207646
; GENERAL INFORMATION:
;  APPLICANT: Krieg, Arthur M.
;  TITLE OF INVENTION: Immunostimulatory Nucleic Acid Molecules
;  FILE REFERENCE: C1039/7004 HCL
;  CURRENT APPLICATION NUMBER: US/08/738,652B
;  CURRENT FILING DATE: 1996-10-30
;  EARLIER APPLICATION NUMBER: US 08/276,358
;  EARLIER FILING DATE: 1994-07-15
;  EARLIER APPLICATION NUMBER: US 08/386,063
;  EARLIER FILING DATE: 1995-02-07
;  NUMBER OF SEQ ID NOS: 55
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 30
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic oligonucleotide
US-08-738-652-30

  Query Match             81.2%;  Score 13;  DB 3;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 17;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          4 CTGGAGCGTTCTC 16
              |||||||||||||
Db         13 CTGGAGCGTTCTC 1


RESULT 4
US-09-286-098-19/c
; Sequence 19, Application US/09286098
; Patent No. 6218371
; GENERAL INFORMATION:
;  APPLICANT: Krieg, Arthur M.
;  APPLICANT: Weiner, George
;  TITLE OF INVENTION: Methods and Products for Stimulating the
;  TITLE OF INVENTION: Immune System Using Immunotherapeutic Oligonucleotides and
;  TITLE OF INVENTION: Cytokines
;  FILE REFERENCE: C1039/7026/HCL
;  CURRENT APPLICATION NUMBER: US/09/286,098
;  CURRENT FILING DATE: 1999-04-02
;  EARLIER APPLICATION NUMBER: US 60/080,729
;  EARLIER FILING DATE: 1998-04-03
;  NUMBER OF SEQ ID NOS: 105
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 19
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic Sequence
US-09-286-098-19

  Query Match             81.2%;  Score 13;  DB 3;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 17;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          4 CTGGAGCGTTCTC 16
              |||||||||||||
Db         13 CTGGAGCGTTCTC 1


RESULT 5
US-08-960-774-27/c
; Sequence 27, Application US/08960774
; Patent No. 6239116
;  GENERAL INFORMATION:
;    APPLICANT:  Krieg et al.,
;    TITLE OF INVENTION:  IMMUNOSTIMULATORY NUCLEIC ACID MOLECULES
;    NUMBER OF SEQUENCES:  111
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Fish & Richardson P.C.
;      STREET:  4225 Executive Square, Suite 1400
;      CITY:  La Jolla
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  92037
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  ASCII text
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/960,774
;      FILING DATE:  30-October-1997
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  U.S. Serial No. 6239116  08/738,652
;      FILING DATE:  October 30, 1996
;      CLASSIFICATION:  514
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Haile, Lisa A.
;      REGISTRATION NUMBER:  38,347
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;      REFERENCE/DOCKET NUMBER:  08918/012001
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  619/678-5070
;      TELEFAX:  619/678-5099
;  INFORMATION FOR SEQ ID NO:  27:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  20 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  DNA
US-08-960-774-27

  Query Match             81.2%;  Score 13;  DB 3;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 17;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          4 CTGGAGCGTTCTC 16
              |||||||||||||
Db         13 CTGGAGCGTTCTC 1


RESULT 6
US-09-325-193A-16/c
; Sequence 16, Application US/09325193A
; Patent No. 6406705
; GENERAL INFORMATION:
;  APPLICANT:  Davis, Heather L.
;  APPLICANT:  Schorr, Joachim
;  APPLICANT:  Krieg, Arthur M.
;  TITLE OF INVENTION:  Use of Nucleic Acids Containing
;  TITLE OF INVENTION:  Unmethylated CpG Dinucleotide as an Adjuvant
;  FILE REFERENCE:  C1039/7025/HCL
;  CURRENT APPLICATION NUMBER: US/09/325,193A
;  CURRENT FILING DATE:  1999-06-03
;  PRIOR APPLICATION NUMBER:  US 09/154,614
;  PRIOR FILING DATE:  1998-09-16
;  PRIOR APPLICATION NUMBER:  PCT/US98/04703
;  PRIOR FILING DATE:  1998-03-10
;  PRIOR APPLICATION NUMBER:  US 60/040,376
;  PRIOR FILING DATE:  1997-03-10
;  NUMBER OF SEQ ID NOS:  98
;  SOFTWARE:  FastSEQ for Windows Version 3.0
; SEQ ID NO 16
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic Oligonucleotide
US-09-325-193A-16

  Query Match             81.2%;  Score 13;  DB 4;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 17;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          4 CTGGAGCGTTCTC 16
              |||||||||||||
Db         13 CTGGAGCGTTCTC 1


RESULT 7
US-09-191-170-19/c
; Sequence 19, Application US/09191170
; Patent No. 6429199
; GENERAL INFORMATION:
;  APPLICANT: Krieg, Arthur M.
;  APPLICANT: Hartmann, Gunther
;  TITLE OF INVENTION: Immunostimulatory Nucleic Acid Molecules
;  TITLE OF INVENTION: for Activating Dendritic Cells
;  FILE REFERENCE: C1039/7017
;  CURRENT APPLICATION NUMBER: US/09/191,170
;  CURRENT FILING DATE: 1998-11-13
;  EARLIER APPLICATION NUMBER: US 08/960,774
;  EARLIER FILING DATE: 1997-10-30
;  EARLIER APPLICATION NUMBER: US 08/738,652
;  EARLIER FILING DATE: 1996-10-30
;  EARLIER APPLICATION NUMBER: US 08/386,063
;  EARLIER FILING DATE: 1995-02-07
;  EARLIER APPLICATION NUMBER: US 08/276,358
;  EARLIER FILING DATE: 1994-07-15
;  NUMBER OF SEQ ID NOS: 99
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 19
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: synthetic oligonucleotide
US-09-191-170-19

  Query Match             81.2%;  Score 13;  DB 4;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 17;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          4 CTGGAGCGTTCTC 16
              |||||||||||||
Db         13 CTGGAGCGTTCTC 1


RESULT 8
US-09-397-787-308/c
; Sequence 308, Application US/09397787
; Patent No. 6468758
; GENERAL INFORMATION:
;  APPLICANT: Benson, Darin R.
;  APPLICANT: Lodes, Michael J.
;  APPLICANT: Mitcham, Jennifer L.
;  APPLICANT: King, Gordon E.
;  TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR OVARIAN
;  TITLE OF INVENTION: CANCER THERAPY AND DIAGNOSIS
;  FILE REFERENCE: 210121.466C2
;  CURRENT APPLICATION NUMBER: US/09/397,787
;  CURRENT FILING DATE: 1999-09-16
;  NUMBER OF SEQ ID NOS: 334
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 308
;   LENGTH: 439
;   TYPE: DNA
;   ORGANISM: Homo sapien
US-09-397-787-308

  Query Match             81.2%;  Score 13;  DB 4;  Length 439;
  Best Local Similarity   100.0%;  Pred. No. 18;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          4 CTGGAGCGTTCTC 16
              |||||||||||||
Db        325 CTGGAGCGTTCTC 313


RESULT 9
US-08-238-863-22
; Sequence 22, Application US/08238863
; Patent No. 5503978
;  GENERAL INFORMATION:
;    APPLICANT:  SCHNEIDER, D. J., GOLD, L., AND FEIGON, J.
;    TITLE OF INVENTION:  HIGH-AFFINITY ssDNA LIGANDS OF HIV-1
;    TITLE OF INVENTION:  REVERSE TRANSCRIPTASE
;    NUMBER OF SEQUENCES:  94
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Beaton & Swanson, P.C.
;      STREET:  4582 South Ulster Street Parkway, Suite
;      STREET:  #403
;      CITY:  Denver
;      STATE:  Colorado
;      COUNTRY:  USA
```

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;       ZIP:  80237
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  Diskette, 5.25 inch, 360 kb storage
;       COMPUTER:  IBM compatible
;       OPERATING SYSTEM:  MS-DOS
;       SOFTWARE:  WordPerfect 5.1
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/238,863
;       FILING DATE:  6-MAY-1994
;       CLASSIFICATION:  435
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  07/714,131
;       FILING DATE:  10-JUNE-1991
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  07/536,428
;       FILING DATE:  11-JUNE-1990
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  07/964,624
;       FILING DATE:  21-OCTOBER-1992
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Barry J. Swanson
;       REGISTRATION NUMBER:  33,215
;       REFERENCE/DOCKET NUMBER:  NEX17
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (303) 850-9900
;       TELEFAX:  (303) 850-9401
;   INFORMATION FOR SEQ ID NO:  22:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  81
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
US-08-238-863-22

  Query Match             75.0%;  Score 12;  DB 1;  Length 81;
  Best Local Similarity   100.0%;  Pred. No. 73;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 ACTCTGGAGCGT 12
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Db         19 ACTCTGGAGCGT 30


RESULT 10
US-08-238-863-45
; Sequence 45, Application US/08238863
; Patent No. 5503978
;  GENERAL INFORMATION:
;    APPLICANT:  SCHNEIDER, D. J., GOLD, L., AND FEIGON, J.
;    TITLE OF INVENTION:  HIGH-AFFINITY ssDNA LIGANDS OF HIV-1
;    TITLE OF INVENTION:  REVERSE TRANSCRIPTASE
;    NUMBER OF SEQUENCES:  94
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Beaton & Swanson, P.C.
;      STREET:  4582 South Ulster Street Parkway, Suite
;      STREET:  #403
;      CITY:  Denver
;      STATE:  Colorado
;      COUNTRY:  USA
;      ZIP:  80237
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette, 5.25 inch, 360 kb storage
;      COMPUTER:  IBM compatible
;      OPERATING SYSTEM:  MS-DOS
;      SOFTWARE:  WordPerfect 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/238,863
;      FILING DATE:  6-MAY-1994
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/714,131
;      FILING DATE:  10-JUNE-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/536,428
;      FILING DATE:  11-JUNE-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/964,624
;      FILING DATE:  21-OCTOBER-1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Barry J. Swanson
;      REGISTRATION NUMBER:  33,215
;      REFERENCE/DOCKET NUMBER:  NEX17
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (303) 850-9900
;      TELEFAX:  (303) 850-9401
;  INFORMATION FOR SEQ ID NO:  45:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  81
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
US-08-238-863-45

  Query Match             75.0%;  Score 12;  DB 1;  Length 81;
  Best Local Similarity   100.0%;  Pred. No. 73;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 ACTCTGGAGCGT 12
              ||||||||||||
Db         19 ACTCTGGAGCGT 30


RESULT 11
US-08-443-407-22
; Sequence 22, Application US/08443407
; Patent No. 5786462
;  GENERAL INFORMATION:
;    APPLICANT:  SCHNEIDER, D. J., GOLD, L., AND FEIGON, J.
;    TITLE OF INVENTION:  HIGH-AFFINITY ssDNA
;    TITLE OF INVENTION:  LIGANDS OF HIV-1 REVERSE
;    TITLE OF INVENTION:  TRANSCRIPTASE
;    NUMBER OF SEQUENCES:  94
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Swanson & Bratschun, L.L.C.
;      STREET:  8400 E. Prentice Avenue, Suite 200
;      CITY:  Englewood
;      STATE:  Colorado
;      COUNTRY:  USA
;      ZIP:  80111
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette, 3.50 inch, 1.44 MB
;      COMPUTER:  IBM compatible
;      OPERATING SYSTEM:  MS-DOS
;      SOFTWARE:  WordPerfect 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/443,407
;      FILING DATE:
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/238,863
;      FILING DATE:  6-MAY-1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/714,131
;      FILING DATE:  10-JUNE-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/536,428
;      FILING DATE:  11-JUNE-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/964,624
;      FILING DATE:  21-OCTOBER-1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Barry J. Swanson
;      REGISTRATION NUMBER:  33,215
;      REFERENCE/DOCKET NUMBER:  NEX17/C1
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (303) 793-3333
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;       TELEFAX:  (303) 793-3433
;   INFORMATION FOR SEQ ID NO:  22:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  81
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
US-08-443-407-22

  Query Match             75.0%;  Score 12;  DB 1;  Length 81;
  Best Local Similarity   100.0%;  Pred. No. 73;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 ACTCTGGAGCGT 12
              ||||||||||||
Db         19 ACTCTGGAGCGT 30


RESULT 12
US-08-443-407-45
; Sequence 45, Application US/08443407
; Patent No. 5786462
;  GENERAL INFORMATION:
;     APPLICANT:  SCHNEIDER, D. J., GOLD, L., AND FEIGON, J.
;     TITLE OF INVENTION:  HIGH-AFFINITY ssDNA
;     TITLE OF INVENTION:  LIGANDS OF HIV-1 REVERSE
;     TITLE OF INVENTION:  TRANSCRIPTASE
;     NUMBER OF SEQUENCES:  94
;     CORRESPONDENCE ADDRESS:
;       ADDRESSEE:  Swanson & Bratschun, L.L.C.
;       STREET:  8400 E. Prentice Avenue, Suite 200
;       CITY:  Englewood
;       STATE:  Colorado
;       COUNTRY:  USA
;       ZIP:  80111
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  Diskette, 3.50 inch, 1.44 MB
;       COMPUTER:  IBM compatible
;       OPERATING SYSTEM:  MS-DOS
;       SOFTWARE:  WordPerfect 5.1
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/443,407
;       FILING DATE:
;       CLASSIFICATION:  435
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  08/238,863
;       FILING DATE:  6-MAY-1994
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  07/714,131
;       FILING DATE:  10-JUNE-1991
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  07/536,428
;       FILING DATE:  11-JUNE-1990
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  07/964,624
;       FILING DATE:  21-OCTOBER-1992
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Barry J. Swanson
;       REGISTRATION NUMBER:  33,215
;       REFERENCE/DOCKET NUMBER:  NEX17/C1
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (303) 793-3333
;       TELEFAX:  (303) 793-3433
;   INFORMATION FOR SEQ ID NO:  45:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  81
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
US-08-443-407-45

  Query Match             75.0%;  Score 12;  DB 1;  Length 81;
  Best Local Similarity   100.0%;  Pred. No. 73;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 ACTCTGGAGCGT 12
              ||||||||||||
Db         19 ACTCTGGAGCGT 30


RESULT 13
PCT-US95-05600-166
; Sequence 166, Application PC/TUS9505600
;  GENERAL INFORMATION:
;     APPLICANT:  GOLD, LARRY
;     APPLICANT:  NIEUWLANDT, DAN
;     APPLICANT:  WECKER, MATTHEW
;     APPLICANT:  SCHNEIDER, DANIEL J.
;     APPLICANT:  FEIGON, JULI
;     APPLICANT:  ALLEN, PATRICK
;     APPLICANT:  SULLENGER, BRUCE A.
;     APPLICANT:  DOUDNA, JENNIFER, A.
;     TITLE OF INVENTION:  HIGH-AFFINITY LIGANDS OF
;     TITLE OF INVENTION:  INSULIIN RECEPTOR ANTIBODIES, TACHYKININ SUBSTANCE
;     TITLE OF INVENTION:  P, HIV INTEGRASE AND HIV-1 REVERSE TRANSCRIPTASE
;     NUMBER OF SEQUENCES:  239
;     CORRESPONDENCE ADDRESS:
;       ADDRESSEE:  Swanson & Bratschun, L.L.C.
;       STREET:  8400 E. Prentice Avenue, Suite 200
;       CITY:  Englewood
;       STATE:  Colorado
;       COUNTRY:  USA
;       ZIP:  80111
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  Diskette, 3.5 inch, 1.44 MG
;       MEDIUM TYPE:  storage
;       COMPUTER:  IBM compatible
;       OPERATING SYSTEM:  MS-DOS
;       SOFTWARE:  WordPerfect 5.1
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  PCT/US95/05600
;       FILING DATE:
;       CLASSIFICATION:
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  08/238,863
;       FILING DATE:  06-MAY-1994
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  08/248,632
;       FILING DATE:  24-MAY-1994
;       CLASSIFICATION:
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  08/303,362
;       FILING DATE:  09-SEPTEMBER-1994
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  08/361,795
;       FILING DATE:  21-DECEMBER-1994
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  08/117,991
;       FILING DATE:  08-SEPTEMBER-1993
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  07/931,473
;       FILING DATE:  17-AUGUST-1992
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  07/964,624
;       FILING DATE:  21-OCTOBER-1992
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  07/536,428
;       FILING DATE:  11-JUNE-1990
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  07/714,131
;       FILING DATE:  10-JUNE-1991
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  07/536,428
;       FILING DATE:  11-JUNE-1990
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Barry J. Swanson
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;       REGISTRATION NUMBER:  33,215
;       REFERENCE/DOCKET NUMBER:  NEX17/PCT
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (303) 793-3333
;       TELEFAX:  (303) 793-3433
;   INFORMATION FOR SEQ ID NO:  166:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  81 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
PCT-US95-05600-166

  Query Match             75.0%;  Score 12;  DB 5;  Length 81;
  Best Local Similarity   100.0%;  Pred. No. 73;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 ACTCTGGAGCGT 12
              ||||||||||||
Db         19 ACTCTGGAGCGT 30


RESULT 14
PCT-US95-05600-189
; Sequence 189, Application PC/TUS9505600
;  GENERAL INFORMATION:
;     APPLICANT:  GOLD, LARRY
;     APPLICANT:  NIEUWLANDT, DAN
;     APPLICANT:  WECKER, MATTHEW
;     APPLICANT:  SCHNEIDER, DANIEL J.
;     APPLICANT:  FEIGON, JULI
;     APPLICANT:  ALLEN, PATRICK
;     APPLICANT:  SULLENGER, BRUCE A.
;     APPLICANT:  DOUDNA, JENNIFER, A.
;     TITLE OF INVENTION:  HIGH-AFFINITY LIGANDS OF
;     TITLE OF INVENTION:  INSULIIN RECEPTOR ANTIBODIES, TACHYKININ SUBSTANCE
;     TITLE OF INVENTION:  P, HIV INTEGRASE AND HIV-1 REVERSE TRANSCRIPTASE
;     NUMBER OF SEQUENCES:  239
;     CORRESPONDENCE ADDRESS:
;       ADDRESSEE:  Swanson & Bratschun, L.L.C.
;       STREET:  8400 E. Prentice Avenue, Suite 200
;       CITY:  Englewood
;       STATE:  Colorado
;       COUNTRY:  USA
;       ZIP:  80111
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  Diskette, 3.5 inch, 1.44 MG
;       MEDIUM TYPE:  storage
;       COMPUTER:  IBM compatible
;       OPERATING SYSTEM:  MS-DOS
;       SOFTWARE:  WordPerfect 5.1
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  PCT/US95/05600
;       FILING DATE:
;       CLASSIFICATION:
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  08/238,863
;       FILING DATE:  06-MAY-1994
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  08/248,632
;       FILING DATE:  24-MAY-1994
;       CLASSIFICATION:
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  08/303,362
;       FILING DATE:  09-SEPTEMBER-1994
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  08/361,795
;       FILING DATE:  21-DECEMBER-1994
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  08/117,991
;       FILING DATE:  08-SEPTEMBER-1993
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  07/931,473
;       FILING DATE:  17-AUGUST-1992
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  07/964,624
;       FILING DATE:  21-OCTOBER-1992
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  07/536,428
;       FILING DATE:  11-JUNE-1990
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  07/714,131
;       FILING DATE:  10-JUNE-1991
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  07/536,428
;       FILING DATE:  11-JUNE-1990
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Barry J. Swanson
;       REGISTRATION NUMBER:  33,215
;       REFERENCE/DOCKET NUMBER:  NEX17/PCT
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (303) 793-3333
;       TELEFAX:  (303) 793-3433
;   INFORMATION FOR SEQ ID NO:  189:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  81 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
PCT-US95-05600-189

  Query Match             75.0%;  Score 12;  DB 5;  Length 81;
  Best Local Similarity   100.0%;  Pred. No. 73;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 ACTCTGGAGCGT 12
              ||||||||||||
Db         19 ACTCTGGAGCGT 30


RESULT 15
PCT-US95-08295-23
; Sequence 23, Application PC/TUS9508295
;  GENERAL INFORMATION:
;     APPLICANT:
;     TITLE OF INVENTION:  BREAST SPECIFIC GENES AND PROTEINS
;     NUMBER OF SEQUENCES:  30
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  Floppy disk
;       COMPUTER:  IBM PC compatible
;       OPERATING SYSTEM:  PC-DOS/MS-DOS
;       SOFTWARE:  PatentIn Release #1.0, Version #1.30
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  PCT/US95/08295
;       FILING DATE:  30-JUN-1995
;       CLASSIFICATION:
;   INFORMATION FOR SEQ ID NO:  23:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  490 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
;     MOLECULE TYPE:  DNA (genomic)
PCT-US95-08295-23

  Query Match             75.0%;  Score 12;  DB 5;  Length 490;
  Best Local Similarity   100.0%;  Pred. No. 77;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 ACTCTGGAGCGT 12
              ||||||||||||
Db        129 ACTCTGGAGCGT 140


Search completed: January 20, 2004, 20:03:12
Job time : 26.1765 secs
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OM nucleic - nucleic search, using sw model

Run on: January 20, 2004, 18:44:59 ; Search time 106.353 Seconds
(without alignments)
530.274 Million cell updates/sec

Title: US-10-068-160-73
Perfect score: 16
Sequence: 1 actctggagcgttctc 16

Scoring table: OLIGO_NUC
Gapop 60.0 , Gapext 60.0

Searched: 2324096 seqs, 1762381658 residues

Word size : 0

Total number of hits satisfying chosen parameters: 2392556

Minimum DB seq length: 0
Maximum DB seq length: 500

Post-processing: Listing first 45 summaries

Database : Published_Applications_NA:*
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11: /cgn2_6/ptodata/1/pubpna/US09C_PUBCOMB.seq:*
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14: /cgn2_6/ptodata/1/pubpna/US10A_PUBCOMB.seq:*
15: /cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
16: /cgn2_6/ptodata/1/pubpna/US10_NEW_PUB.seq:*
17: /cgn2_6/ptodata/1/pubpna/US60_NEW_PUB.seq:*
18: /cgn2_6/ptodata/1/pubpna/US60_PUBCOMB.seq:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.		Score	% Query Match	Length	DB	ID	Description
1		16	100.0	16	13	US-10-194-035-113	Sequence 113, App
2		16	100.0	16	15	US-10-068-160-73	Sequence 73, Appl
	c 3	13	81.2	20	9	US-09-824-468-19	Sequence 19, Appl
	c 4	13	81.2	20	10	US-09-800-266A-16	Sequence 16, Appl
	c 5	13	81.2	20	10	US-09-895-007A-16	Sequence 16, Appl
	c 6	13	81.2	20	10	US-09-920-313-16	Sequence 16, Appl
	c 7	13	81.2	20	11	US-09-415-142-20	Sequence 20, Appl
	c 8	13	81.2	20	11	US-09-888-326-119	Sequence 119, App
	c 9	13	81.2	20	11	US-09-888-326-277	Sequence 277, App
	c 10	13	81.2	20	11	US-09-888-326-278	Sequence 278, App
	c 11	13	81.2	20	11	US-09-818-918-30	Sequence 30, Appl
	c 12	13	81.2	20	11	US-09-931-583-20	Sequence 20, Appl
	c 13	13	81.2	20	11	US-09-776-479-582	Sequence 582, App
	c 14	13	81.2	20	11	US-09-776-479-594	Sequence 594, App
	c 15	13	81.2	20	11	US-09-776-479-747	Sequence 747, App
	c 16	13	81.2	20	11	US-09-954-987B-47	Sequence 47, Appl
	c 17	13	81.2	20	13	US-10-187-264A-27	Sequence 27, Appl
	c 18	13	81.2	20	13	US-10-265-072-59	Sequence 59, Appl
	c 19	13	81.2	20	13	US-10-306-522-27	Sequence 27, Appl
	c 20	13	81.2	20	14	US-10-023-909A-16	Sequence 16, Appl
	c 21	13	81.2	20	15	US-10-112-653-559	Sequence 559, App
	c 22	13	81.2	20	15	US-10-112-653-571	Sequence 571, App
	c 23	13	81.2	20	15	US-10-112-653-720	Sequence 720, App
	c 24	13	81.2	20	15	US-10-112-653-774	Sequence 774, App
	c 25	13	81.2	20	15	US-10-017-995-582	Sequence 582, App
	c 26	13	81.2	20	15	US-10-017-995-594	Sequence 594, App
	c 27	13	81.2	20	15	US-10-017-995-747	Sequence 747, App
	c 28	13	81.2	20	15	US-10-300-247-16	Sequence 16, Appl
	c 29	13	81.2	20	15	US-10-161-229-19	Sequence 19, Appl
	c 30	13	81.2	425	11	US-09-918-995-6168	Sequence 6168, Ap
	c 31	13	81.2	433	11	US-09-918-995-4250	Sequence 4250, Ap
	c 32	13	81.2	439	9	US-09-876-889-308	Sequence 308, App
	33	12	75.0	12	15	US-10-068-160-102	Sequence 102, App
	c 34	12	75.0	20	11	US-09-888-326-276	Sequence 276, App
	c 35	12	75.0	20	11	US-09-776-479-597	Sequence 597, App
	c 36	12	75.0	20	15	US-10-112-653-574	Sequence 574, App
	c 37	12	75.0	20	15	US-10-017-995-597	Sequence 597, App
	38	12	75.0	25	15	US-10-098-263B-124825	Sequence 124825,
	39	12	75.0	244	13	US-10-029-386-24520	Sequence 24520, A
	c 40	12	75.0	271	9	US-09-923-876-6203	Sequence 6203, Ap
	c 41	12	75.0	271	12	US-09-923-876-6203	Sequence 6203, Ap
	42	12	75.0	339	9	US-09-778-320-183	Sequence 183, App
	43	12	75.0	339	9	US-09-910-689-183	Sequence 183, App
	44	12	75.0	339	14	US-10-010-742-183	Sequence 183, App
	c 45	12	75.0	417	14	US-10-044-090-624	Sequence 624, App

ALIGNMENTS

RESULT 1
US-10-194-035-113
; Sequence 113, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
; APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
; APPLICANT: SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
; APPLICANT: KLINMAN, Dennis
; APPLICANT: ISHII, Ken
; APPLICANT: VERTHELYI, Daniela
; TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
; FILE REFERENCE: 4239-63317
; CURRENT APPLICATION NUMBER: US/10/194,035
; CURRENT FILING DATE: 2002-07-12
; PRIOR APPLICATION NUMBER: PCT/US01/01122
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: US 60/176,115
; PRIOR FILING DATE: 2000-01-14
; NUMBER OF SEQ ID NOS: 119
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 113
; LENGTH: 16
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-113

Query Match 100.0%; Score 16; DB 13; Length 16;
Best Local Similarity 100.0%; Pred. No. 2.4;
Matches 16; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 ACTCTGGAGCGTTCTC 16
              ||||||||||||||||
Db          1 ACTCTGGAGCGTTCTC 16
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RESULT 2

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US-10-068-160-73
; Sequence 73, Application US/10068160
; Publication No. US20030060440A1
; GENERAL INFORMATION:
;  APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA, REPRESENTED BY THE
;  APPLICANT:  SECRETARY, DEPARTMENT OF HEALTH AND HUMAN SERVICES
;  APPLICANT:  KLINMAN, Dennis
;  APPLICANT:  ISHII, Ken
;  APPLICANT:  VERTHELYI, Daniela
;  TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
;  FILE REFERENCE: 4239-61999
;  CURRENT APPLICATION NUMBER: US/10/068,160
;  CURRENT FILING DATE:  2002-02-06
;  PRIOR APPLICATION NUMBER: 60/128,898
;  PRIOR FILING DATE: 1999-04-12
;  NUMBER OF SEQ ID NOS: 120
;  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 73
;   LENGTH: 16
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Oligonucleotide
US-10-068-160-73

  Query Match             100.0%;  Score 16;  DB 15;  Length 16;
  Best Local Similarity   100.0%;  Pred. No. 2.4;
  Matches   16;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 ACTCTGGAGCGTTCTC 16
              ||||||||||||||||
Db          1 ACTCTGGAGCGTTCTC 16


RESULT 3
US-09-824-468-19/c
; Sequence 19, Application US/09824468
; Patent No. US20020064515A1
; GENERAL INFORMATION:
;  APPLICANT: Krieg, Arthur M.
;  APPLICANT:  Weiner, George
;  TITLE OF INVENTION: Methods and Products for Stimulating the
;  TITLE OF INVENTION:  Immune System Using Immunotherapeutic Oligonucleotides and
;  TITLE OF INVENTION:  Cytokines
;  FILE REFERENCE: C1039/7026/HCL
;  CURRENT APPLICATION NUMBER: US/09/824,468
;  CURRENT FILING DATE:  2001-04-02
;  PRIOR APPLICATION NUMBER: 09/286,098
;  PRIOR FILING DATE: 1999-04-02
;  NUMBER OF SEQ ID NOS: 105
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 19
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic Sequence
US-09-824-468-19

  Query Match             81.2%;  Score 13;  DB 9;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 1.6e+02;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          4 CTGGAGCGTTCTC 16
              |||||||||||||
Db         13 CTGGAGCGTTCTC 1


RESULT 4
US-09-800-266A-16/c
; Sequence 16, Application US/09800266A
; Patent No. US20020156033A1
; GENERAL INFORMATION:
;  APPLICANT: Bratzler, Robert L.
;  APPLICANT:  Petersen, Deanna M.
;  TITLE OF INVENTION: Immunostimulatory Nucleic Acids and
;  TITLE OF INVENTION:  Cancer Medicament Combination Therapy for the Treatment of
;  TITLE OF INVENTION:  Cancer
;  FILE REFERENCE: C1037/7017(HCL/MAT)
;  CURRENT APPLICATION NUMBER: US/09/800,266A
;  CURRENT FILING DATE:  2001-03-05
;  PRIOR APPLICATION NUMBER: US 60/187,214
;  PRIOR FILING DATE: 2000-03-03
;  NUMBER OF SEQ ID NOS: 146
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 16
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic Sequence
US-09-800-266A-16

  Query Match             81.2%;  Score 13;  DB 10;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 1.6e+02;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          4 CTGGAGCGTTCTC 16
              |||||||||||||
Db         13 CTGGAGCGTTCTC 1


RESULT 5
US-09-895-007A-16/c
; Sequence 16, Application US/09895007A
; Patent No. US20020165178A1
; GENERAL INFORMATION:
;  APPLICANT: Schetter, Christian
;  APPLICANT:  Bratzler, Robert L.
;  APPLICANT:  Petersen, Deanna M.
;  TITLE OF INVENTION: IMMUNOSTIMULATORY NUCLEIC ACIDS FOR THE
;  TITLE OF INVENTION:  TREATMENT OF ANEMIA, THROMBOCYTOPENIA, AND NEUTROPENIA
;  FILE REFERENCE: C1041/7014 (AWS)
;  CURRENT APPLICATION NUMBER: US/09/895,007A
;  CURRENT FILING DATE:  2001-06-28
;  PRIOR APPLICATION NUMBER: US 60/214,368
;  PRIOR FILING DATE: 2000-06-28
;  NUMBER OF SEQ ID NOS: 133
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 16
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic oligonucleotide
US-09-895-007A-16

  Query Match             81.2%;  Score 13;  DB 10;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 1.6e+02;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          4 CTGGAGCGTTCTC 16
              |||||||||||||
Db         13 CTGGAGCGTTCTC 1


RESULT 6
US-09-920-313-16/c
; Sequence 16, Application US/09920313
; Publication No. US20020198165A1
; GENERAL INFORMATION:
;  APPLICANT: Bratzler, Robert L.
;  APPLICANT:  Petersen, Deanna M.
;  TITLE OF INVENTION: Nucleic Acids for the Prevention and
;  TITLE OF INVENTION:  Treatment of Gastric Ulcers
;  FILE REFERENCE: C1037/7019 (HCL/MAT)
```

; CURRENT APPLICATION NUMBER: US/09/920,313
; CURRENT FILING DATE: 2001-08-01
; PRIOR APPLICATION NUMBER: US 60/222,248
; PRIOR FILING DATE: 2001-08-08
; NUMBER OF SEQ ID NOS: 148
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 16
; LENGTH: 20
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic Sequence
US-09-920-313-16

Query Match 81.2%; Score 13; DB 10; Length 20;
Best Local Similarity 100.0%; Pred. No. 1.6e+02;
Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 4 CTGGAGCGTTCTC 16
||||||||||||||
Db 13 CTGGAGCGTTCTC 1

RESULT 7
US-09-415-142-20/c
; Sequence 20, Application US/09415142
; Publication No. US20030026782A1
; GENERAL INFORMATION:
; APPLICANT: Krieg, Arthur M.
; APPLICANT: Klinman, Dennis
; APPLICANT: Steinberg, Alfred D.
; TITLE OF INVENTION: IMMUNOMODULATORY OLIGONUCLEOTIDES
; FILE REFERENCE: C1039/7029
; CURRENT APPLICATION NUMBER: US/09/415,142
; CURRENT FILING DATE: 1999-10-09
; PRIOR APPLICATION NUMBER: US 08/386,063
; PRIOR FILING DATE: 1995-02-07
; NUMBER OF SEQ ID NOS: 27
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 20
; LENGTH: 20
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic oligonucleotide
US-09-415-142-20

Query Match 81.2%; Score 13; DB 11; Length 20;
Best Local Similarity 100.0%; Pred. No. 1.6e+02;
Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 4 CTGGAGCGTTCTC 16
||||||||||||||
Db 13 CTGGAGCGTTCTC 1

RESULT 8
US-09-888-326-119/c
; Sequence 119, Application US/09888326
; Publication No. US20030026801A1
; GENERAL INFORMATION:
; APPLICANT: Weiner, George
; APPLICANT: Hartmann, Gunther
; TITLE OF INVENTION: Methods for Enhancing Antibody-Induced
; TITLE OF INVENTION: Cell Lysis and Treating Cancer
; FILE REFERENCE: C1039/7052 (AWS)
; CURRENT APPLICATION NUMBER: US/09/888,326
; CURRENT FILING DATE: 2001-06-22
; PRIOR APPLICATION NUMBER: US 60/213,346
; PRIOR FILING DATE: 2000-06-22
; NUMBER OF SEQ ID NOS: 848
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 119
; LENGTH: 20
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic oligonucleotide
; NAME/KEY: misc_feature
; LOCATION: (0)...(0)
; OTHER INFORMATION: phosphodiester backbone
; NAME/KEY: misc_feature
; LOCATION: (1)...(1)
; OTHER INFORMATION: biotinylated 5' end
US-09-888-326-119

Query Match 81.2%; Score 13; DB 11; Length 20;
Best Local Similarity 100.0%; Pred. No. 1.6e+02;
Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 4 CTGGAGCGTTCTC 16
||||||||||||||
Db 13 CTGGAGCGTTCTC 1

RESULT 9
US-09-888-326-277/c
; Sequence 277, Application US/09888326
; Publication No. US20030026801A1
; GENERAL INFORMATION:
; APPLICANT: Weiner, George
; APPLICANT: Hartmann, Gunther
; TITLE OF INVENTION: Methods for Enhancing Antibody-Induced
; TITLE OF INVENTION: Cell Lysis and Treating Cancer
; FILE REFERENCE: C1039/7052 (AWS)
; CURRENT APPLICATION NUMBER: US/09/888,326
; CURRENT FILING DATE: 2001-06-22
; PRIOR APPLICATION NUMBER: US 60/213,346
; PRIOR FILING DATE: 2000-06-22
; NUMBER OF SEQ ID NOS: 848
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 277
; LENGTH: 20
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic oligonucleotide
; NAME/KEY: misc_feature
; LOCATION: (0)...(0)
; OTHER INFORMATION: phosphodiester backbone
US-09-888-326-277

Query Match 81.2%; Score 13; DB 11; Length 20;
Best Local Similarity 100.0%; Pred. No. 1.6e+02;
Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 4 CTGGAGCGTTCTC 16
||||||||||||||
Db 13 CTGGAGCGTTCTC 1

RESULT 10
US-09-888-326-278/c
; Sequence 278, Application US/09888326
; Publication No. US20030026801A1
; GENERAL INFORMATION:
; APPLICANT: Weiner, George
; APPLICANT: Hartmann, Gunther
; TITLE OF INVENTION: Methods for Enhancing Antibody-Induced
; TITLE OF INVENTION: Cell Lysis and Treating Cancer
; FILE REFERENCE: C1039/7052 (AWS)
; CURRENT APPLICATION NUMBER: US/09/888,326
; CURRENT FILING DATE: 2001-06-22
; PRIOR APPLICATION NUMBER: US 60/213,346
; PRIOR FILING DATE: 2000-06-22
; NUMBER OF SEQ ID NOS: 848

```
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 278
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic oligonucleotide
;   NAME/KEY: misc_feature
;   LOCATION: (0)...(0)
;   OTHER INFORMATION: phosphodiester backbone
US-09-888-326-278

  Query Match             81.2%;  Score 13;  DB 11;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 1.6e+02;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          4 CTGGAGCGTTCTC 16
              |||||||||||||
Db         13 CTGGAGCGTTCTC 1


RESULT 11
US-09-818-918-30/c
; Sequence 30, Application US/09818918
; Publication No. US20030050261A1
; GENERAL INFORMATION:
;  APPLICANT: Krieg, Arthur M.
;  APPLICANT:  Kline, Joel N.
;  APPLICANT:  Klinman, Dennis
;  APPLICANT:  Steinberg, Alfred D.
;  TITLE OF INVENTION: Immunostimulatory Nucleic Acid Molecules
;  FILE REFERENCE: C1039/7048 (AWS)
;  CURRENT APPLICATION NUMBER: US/09/818,918
;  CURRENT FILING DATE:  2001-03-27
;  PRIOR APPLICATION NUMBER: US 08/276,358
;  PRIOR FILING DATE: 1994-07-15
;  PRIOR APPLICATION NUMBER: US 08/386,063
;  PRIOR FILING DATE: 1995-02-07
;  PRIOR APPLICATION NUMBER: US 08/738,652
;  PRIOR FILING DATE: 1996-10-30
;  NUMBER OF SEQ ID NOS: 56
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 30
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic oligonucleotide
US-09-818-918-30

  Query Match             81.2%;  Score 13;  DB 11;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 1.6e+02;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          4 CTGGAGCGTTCTC 16
              |||||||||||||
Db         13 CTGGAGCGTTCTC 1


RESULT 12
US-09-931-583-20/c
; Sequence 20, Application US/09931583
; Publication No. US20030050263A1
; GENERAL INFORMATION:
;  APPLICANT: Krieg, Arthur
;  APPLICANT:  Klinman, Dennis
;  APPLICANT:  Steinberg, Alfred
;  TITLE OF INVENTION: Methods and Products for Treating HIV Infection
;  FILE REFERENCE: C1039/7053(HCL)
;  CURRENT APPLICATION NUMBER: US/09/931,583
;  CURRENT FILING DATE:  2001-08-16
;  PRIOR APPLICATION NUMBER: US 08/276,358
;  PRIOR FILING DATE: 1994-07-15
;  PRIOR APPLICATION NUMBER: US 09/415,142
;  PRIOR FILING DATE: 1999-10-09
;  NUMBER OF SEQ ID NOS: 75
;  SOFTWARE: PatentIn version 3.0
; SEQ ID NO 20
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   NAME/KEY: misc_feature
;   OTHER INFORMATION: Synthetic Oligonucleotide
US-09-931-583-20

  Query Match             81.2%;  Score 13;  DB 11;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 1.6e+02;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          4 CTGGAGCGTTCTC 16
              |||||||||||||
Db         13 CTGGAGCGTTCTC 1


RESULT 13
US-09-776-479-582/c
; Sequence 582, Application US/09776479
; Publication No. US20030087848A1
; GENERAL INFORMATION:
;  APPLICANT: Bratzler, Robert L.
;  APPLICANT:  Petersen, Deanna M.
;  APPLICANT:  Fouron, Yves
;  TITLE OF INVENTION: Immunostimulatory Nucleic Acids for the
;  TITLE OF INVENTION:  Treatment of Asthma and Allergy
;  FILE REFERENCE: C1037/7013 (HCL/MAT)
;  CURRENT APPLICATION NUMBER: US/09/776,479
;  CURRENT FILING DATE:  2001-02-02
;  PRIOR APPLICATION NUMBER: US 60/179,991
;  PRIOR FILING DATE: 2000-02-03
;  NUMBER OF SEQ ID NOS: 1093
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 582
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic Sequence
US-09-776-479-582

  Query Match             81.2%;  Score 13;  DB 11;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 1.6e+02;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          4 CTGGAGCGTTCTC 16
              |||||||||||||
Db         13 CTGGAGCGTTCTC 1


RESULT 14
US-09-776-479-594/c
; Sequence 594, Application US/09776479
; Publication No. US20030087848A1
; GENERAL INFORMATION:
;  APPLICANT: Bratzler, Robert L.
;  APPLICANT:  Petersen, Deanna M.
;  APPLICANT:  Fouron, Yves
;  TITLE OF INVENTION: Immunostimulatory Nucleic Acids for the
;  TITLE OF INVENTION:  Treatment of Asthma and Allergy
;  FILE REFERENCE: C1037/7013 (HCL/MAT)
;  CURRENT APPLICATION NUMBER: US/09/776,479
;  CURRENT FILING DATE:  2001-02-02
;  PRIOR APPLICATION NUMBER: US 60/179,991
;  PRIOR FILING DATE: 2000-02-03
;  NUMBER OF SEQ ID NOS: 1093
;  SOFTWARE: FastSEQ for Windows Version 3.0
```

; SEQ ID NO 594
; LENGTH: 20
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic Sequence
US-09-776-479-594

Query Match 81.2%; Score 13; DB 11; Length 20;
Best Local Similarity 100.0%; Pred. No. 1.6e+02;
Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 4 CTGGAGCGTTCTC 16
||||||||||||
Db 13 CTGGAGCGTTCTC 1

RESULT 15
US-09-776-479-747/c
; Sequence 747, Application US/09776479
; Publication No. US20030087848A1
; GENERAL INFORMATION:
; APPLICANT: Bratzler, Robert L.
; APPLICANT: Petersen, Deanna M.
; APPLICANT: Fouron, Yves
; TITLE OF INVENTION: Immunostimulatory Nucleic Acids for the
; TITLE OF INVENTION: Treatment of Asthma and Allergy
; FILE REFERENCE: C1037/7013 (HCL/MAT)
; CURRENT APPLICATION NUMBER: US/09/776,479
; CURRENT FILING DATE: 2001-02-02
; PRIOR APPLICATION NUMBER: US 60/179,991
; PRIOR FILING DATE: 2000-02-03
; NUMBER OF SEQ ID NOS: 1093
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 747
; LENGTH: 20
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (1)...(3)
; OTHER INFORMATION: Conjugated to biotin moiety.
; FEATURE:
; OTHER INFORMATION: Synthetic Sequence
US-09-776-479-747

Query Match 81.2%; Score 13; DB 11; Length 20;
Best Local Similarity 100.0%; Pred. No. 1.6e+02;
Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 4 CTGGAGCGTTCTC 16
||||||||||||
Db 13 CTGGAGCGTTCTC 1

Search completed: January 20, 2004, 20:51:03
Job time : 107.353 secs

GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: January 20, 2004, 17:17:18 ; Search time 981.412 Seconds
(without alignments)
396.237 Million cell updates/sec

Title: US-10-068-160-73
Perfect score: 16
Sequence: 1 actctggagcgttctc 16

Scoring table: OLIGO_NUC
Gapop 60.0 , Gapext 60.0

Searched: 22781392 seqs, 12152238056 residues

Word size : 0

Total number of hits satisfying chosen parameters: 21849362

Minimum DB seq length: 0
Maximum DB seq length: 500

Post-processing: Listing first 45 summaries

Database : EST:*
1: em_estba:*
2: em_esthum:*
3: em_estin:*
4: em_estmu:*
5: em_estov:*
6: em_estpl:*
7: em_estro:*
8: em_htc:*
9: gb_est1:*
10: gb_est2:*
11: gb_htc:*
12: gb_est3:*
13: gb_est4:*
14: gb_est5:*
15: em_estfun:*
16: em_estom:*
17: em_gss_hum:*
18: em_gss_inv:*
19: em_gss_pln:*
20: em_gss_vrt:*
21: em_gss_fun:*
22: em_gss_mam:*
23: em_gss_mus:*
24: em_gss_pro:*
25: em_gss_rod:*
26: em_gss_phg:*
27: em_gss_vrl:*
28: gb_gss1:*
29: gb_gss2:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	Result No.	Score	% Query Match	Length	DB	ID	Description
	1	15	93.8	199	14	CA778499	CA778499 MPL384_9_
	2	15	93.8	428	9	AI401438	AI401438 tg64a08.x
c	3	15	93.8	445	28	AQ472178	AQ472178 CITBI-E1-
	4	15	93.8	480	28	AQ526058	AQ526058 HS_5309_B
	5	15	93.8	495	28	AZ141640	AZ141640 SP_0045_A
	6	14	87.5	322	14	D59115	D59115 HUM522B03B
c	7	14	87.5	351	10	BF811540	BF811540 CM2-CI017
	8	14	87.5	357	10	BE555509	BE555509 sp90c02.y
c	9	14	87.5	386	14	T04093	T04093 43 Lambda-P
c	10	14	87.5	407	10	BE652060	BE652060 UI-M-AO0-
c	11	14	87.5	411	9	AW414260	AW414260 uo96c11.y
c	12	14	87.5	422	28	AZ857020	AZ857020 2M0161I09
	13	14	87.5	427	14	CA938841	CA938841 sav38f12.
c	14	14	87.5	435	13	BU973804	BU973804 HB26A09r
	15	14	87.5	442	13	BQ467058	BQ467058 HS02H04r
c	16	14	87.5	448	28	AZ696255	AZ696255 RPCI-23-2
	17	14	87.5	453	13	BQ296418	BQ296418 san91h05.
	18	14	87.5	466	14	CA938075	CA938075 sav47e09.
	19	14	87.5	468	28	AZ098299	AZ098299 RPCI-23-1
	20	14	87.5	471	9	AW396924	AW396924 sg64h12.y
	21	14	87.5	479	12	BI316264	BI316264 saf01b05.
c	22	14	87.5	485	14	CA025616	CA025616 HZ52K19r
	23	14	87.5	490	14	CB639539	CB639539 OSJNEa11A
c	24	14	87.5	490	28	BH110075	BH110075 RPCI-24-3
c	25	14	87.5	494	13	BQ462451	BQ462451 HD01B22T
	26	14	87.5	495	12	BM954762	BM954762 sam73b03.
c	27	14	87.5	500	14	CA007728	CA007728 HU08N10r
c	28	13	81.2	114	10	BF230055	BF230055 CM4-CT048
	29	13	81.2	129	9	AA864144	AA864144 SMTBSOA00
	30	13	81.2	181	9	AA301965	AA301965 EST15024
	31	13	81.2	204	9	AA192762	AA192762 zq12d10.s
	32	13	81.2	205	10	BF757771	BF757771 CM4-CT057
	33	13	81.2	212	9	AW614275	AW614275 hg91e09.x
c	34	13	81.2	219	10	BE876790	BE876790 601488364
	35	13	81.2	222	9	AI786422	AI786422 uj55c08.x
c	36	13	81.2	224	9	AA192729	AA192729 zq12d09.r
c	37	13	81.2	227	9	AA776083	AA776083 ae79d05.s
c	38	13	81.2	229	9	AW352326	AW352326 CM4-HT013
c	39	13	81.2	231	9	AW352305	AW352305 CM4-HT013
	40	13	81.2	232	14	CD279527	CD279527 G44223.80
	41	13	81.2	236	9	AA889647	AA889647 ak50c04.s
	42	13	81.2	236	9	AA181312	AA181312 zp58c01.s
c	43	13	81.2	241	12	BI162729	BI162729 RE01964.3
	44	13	81.2	247	9	AA115055	AA115055 zl06c09.s
	45	13	81.2	249	9	AA739047	AA739047 vv66d05.r

ALIGNMENTS

RESULT 1
CA778499
LOCUS CA778499 199 bp mRNA linear EST 03-DEC-2002
DEFINITION MPL384_9_H02 MPL Sus scrofa cDNA clone pSPORT1 5', mRNA sequence.
ACCESSION CA778499
VERSION CA778499.1 GI:26016374
KEYWORDS EST.
SOURCE Sus scrofa (pig)
ORGANISM Sus scrofa
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
REFERENCE 1 (bases 1 to 199)
AUTHORS Center for Animal Functional Genomics.
TITLE Generation of ESTs from mixed pig cDNA libraries
JOURNAL Unpublished
COMMENT Contact: Steven P. Suchyta
Center for Animal Functional Genomics, Department of Animal Science
Michigan State University
B215 Anthony Hall, East Lansing, MI 48824, USA
Tel: 517 355 8443
Fax: 517 432 9168
Email: suchytas@msu.edu
Single Pass sequencing. Bases called and alt-trimmed with phred
v0.0204425.c. Vector identified by cross_match with the -minscore
20 -minmatch 12 options.
Seq primer: T7.
FEATURES Location/Qualifiers

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                    /organism="Sus scrofa"
                    /mol_type="mRNA"
                    /db_xref="taxon:9823"
                    /clone="pSPORT1"
                    /sex="Male and female"
                    /tissue_type="pooled"
                    /dev_stage="pooled"
                    /lab_host="DH10B"
                    /clone_lib="MPL"
                    /note="Organ: pooled; Vector: pSPORT1; Site_1: NotI;
                    Site_2: SalI; Library made from pooled tissue from adipose
                    , adrenal gland, blood leukocytes, brain, cartilage, eye,
                    heart, intestine, kidney, liver, lung lymph nodes, mammary
                    gland, myogenic satellite cells, ovary, pancreas,
                    pituitary gland, placenta, skin, spinal cord, spleen,
                    stomach, tendon, testes, uterus, and vascular from various
                    developmental and physiological stages."
BASE COUNT       34 a     55 c     64 g     46 t
ORIGIN

  Query Match             93.8%;  Score 15;  DB 14;  Length 199;
  Best Local Similarity   100.0%;  Pred. No. 51;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 ACTCTGGAGCGTTCT 15
              |||||||||||||||
Db         69 ACTCTGGAGCGTTCT 83


RESULT 2
AI401438
LOCUS       AI401438                428 bp    mRNA    linear   EST 30-MAR-1999
DEFINITION  tg64a08.x1 Soares_NhHMPu_S1 Homo sapiens cDNA clone IMAGE:2113526
            3', mRNA sequence.
ACCESSION   AI401438
VERSION     AI401438.1  GI:4244525
KEYWORDS    EST.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 428)
  AUTHORS   NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
  TITLE     National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
            Tumor Gene Index
  JOURNAL   Unpublished
COMMENT     Contact: Robert Strausberg, Ph.D.
            Email: cgapbs-r@mail.nih.gov
            This clone is available royalty-free through LLNL ; contact the
            IMAGE Consortium (info@image.llnl.gov) for further information.
            Insert Length: 1814   Std Error: 0.00
            Seq primer: -40UP from Gibco
            High quality sequence stop: 420.
FEATURES             Location/Qualifiers
     source          1. .428
                     /organism="Homo sapiens"
                     /mol_type="mRNA"
                     /db_xref="taxon:9606"
                     /clone="IMAGE:2113526"
                     /tissue_type="Pooled human melanocyte, fetal heart, and
                     pregnant uterus"
                     /lab_host="DH10B"
                     /clone_lib="Soares_NhHMPu_S1"
                     /note="Organ: mixed (see below); Vector: pT7T3D-Pac
                     (Pharmacia) with a modified polylinker; Site_1: Not I;
                     Site_2: Eco RI; Equal amounts of plasmid DNA from three
                     normalized libraries (melanocyte 2NbHM, pregnant uterus
                     NbHPU, and fetal heart NbHH19W) were mixed, and ss circles
                     were made in vitro. Following HAP purification, this DNA
                     was used as tracer in a subtractive hybridization
                     reaction. The driver was PCR-amplified cDNAs from pools of
                     5,000 clones made from the same 3 libraries. The pools
                     consisted of I.M.A.G.E. clones 260232-265223,
                     340488-345479, and 484488-489479."
BASE COUNT       72 a     138 c     144 g     74 t
ORIGIN

  Query Match             93.8%;  Score 15;  DB 9;  Length 428;
  Best Local Similarity   100.0%;  Pred. No. 63;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 CTCTGGAGCGTTCTC 16
              |||||||||||||||
Db        338 CTCTGGAGCGTTCTC 352


RESULT 3
AQ472178/c
LOCUS       AQ472178                445 bp    DNA     linear   GSS 23-APR-1999
DEFINITION  CITBI-E1-2589E3.TR CITBI-E1 Homo sapiens genomic clone 2589E3,
            genomic survey sequence.
ACCESSION   AQ472178
VERSION     AQ472178.1  GI:4655832
KEYWORDS    GSS.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 445)
  AUTHORS   Zhao,S., Adams,M.D., Nierman,W., Malek,J., Shizuya,H., Simon,M. and
            Venter,J.C.
  TITLE     Use of BAC End Sequences from CalTech Libraries for Sequence-Ready
            Map Building
  JOURNAL   Unpublished
COMMENT     Contact: Shaying Zhao, William Nierman, Mark Adams
            Department of Eukaryotic Genomics
            The Institute for Genomic Research
            9712 Medical Center Dr., Rockville, MD 20850
            Tel: 301 838 0200
            Fax: 301 838 0208
            Email: hbe@tigr.org
            Clones are available from Research Genetics (info@resgen.com). BAC
            end search page:
            http://www.tigr.org/tdb/humgen/bac_end_search/bac_end_search.html.
            Seq primer: M13 Reverse
            Class: BAC ends.
FEATURES             Location/Qualifiers
     source          1. .445
                     /organism="Homo sapiens"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:9606"
                     /clone="2589E3"
                     /sex="male"
                     /cell_type="sperm"
                     /clone_lib="CITBI-E1"
                     /note="Vector: pBeloBAC11; Site_1: EcoRI; Site_2: EcoRI;
                     CalTech Human BAC Library D"
BASE COUNT      137 a     83 c     118 g     107 t
ORIGIN

  Query Match             93.8%;  Score 15;  DB 28;  Length 445;
  Best Local Similarity   100.0%;  Pred. No. 64;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 CTCTGGAGCGTTCTC 16
              |||||||||||||||
Db        182 CTCTGGAGCGTTCTC 168


RESULT 4
AQ526058
LOCUS       AQ526058                480 bp    DNA     linear   GSS 11-MAY-1999
DEFINITION  HS_5309_B1_A12_T7A RPCI-11 Human Male BAC Library Homo sapiens
            genomic clone Plate=885 Col=23 Row=B, genomic survey sequence.
ACCESSION   AQ526058
```

```
VERSION     AQ526058.1  GI:4773378
KEYWORDS    GSS.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 480)
  AUTHORS   Mahairas,G.G., Wallace,J.C., Smith,K., Swartzell,S., Holzman,T.,
            Keller,A., Shaker,R., Furlong,J., Young,J., Zhao,S., Adams,M.D. and
            Hood,L.
  TITLE     Sequence-tagged connectors: A sequence approach to mapping and
            scanning the human genome
  JOURNAL   Proc. Natl. Acad. Sci. U.S.A. 96 (17), 9739-9744 (1999)
  MEDLINE   99380589
   PUBMED   10449764
COMMENT     Contact: Mahairas GG, Wallace JC, Hood L
            High Throughput Sequencing Center
            University of Washington
            401 Queen Anne Avenue North, Seattle, WA 98109, USA
            Tel: (206) 616-3618
            Fax: (206) 616-3887
            Email: jwallace@u.washington.edu
            Clones are derived from the human BAC library RPCI-11. For BAC
            library availability, please contact Pieter de Jong
            (pieter@dejong.med.buffalo.edu). Clones may be purchased from
            BACPAC Resources (http://bacpac.med.buffalo.edu/ordering_bac.htm)
            or from Resear h Genetics (info@resgen.com). BAC end Web Server:
            http://www.htsc.washington.edu
            Plate: 885  row: B  column: 23
            Seq primer: T7
            Class: BAC ends
            High quality sequence stop: 480.
FEATURES             Location/Qualifiers
     source          1. .480
                     /organism="Homo sapiens"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:9606"
                     /clone="Plate=885 Col=23 Row=B"
                     /sex="male"
                     /clone_lib="RPCI-11 Human Male BAC Library"
                     /note="Vector: pBACe3.6; Site_1: EcoRI; Site_2: EcoRI;
                     Male blood DNA was isolated from one randomly chosen donor
                     and partially digested with a combination of EcoRI and
                     EcoRI Methylase. Size selected DNA was cloned into the
                     pBACe3.6 vector at EcoRI sites"
BASE COUNT      118 a    116 c     95 g    149 t      2 others
ORIGIN

  Query Match             93.8%;  Score 15;  DB 28;  Length 480;
  Best Local Similarity   100.0%;  Pred. No. 65;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 CTCTGGAGCGTTCTC 16
              ||||||||||||||||
Db         68 CTCTGGAGCGTTCTC 82


RESULT 5
AZ141640
LOCUS       AZ141640                495 bp    DNA     linear   GSS 28-AUG-2000
DEFINITION  SP_0045_A1_C04_SP6E Strongylocentrotus purpuratus, purple sea
            urchin, sperm genomic BAC library Strongylocentrotus purpuratus
            genomic clone Plate=45 Col=7 Row=E, genomic survey sequence.
ACCESSION   AZ141640
VERSION     AZ141640.1  GI:8293543
KEYWORDS    GSS.
SOURCE      Strongylocentrotus purpuratus
  ORGANISM  Strongylocentrotus purpuratus
            Eukaryota; Metazoa; Echinodermata; Eleutherozoa; Echinozoa;
            Echinoidea; Euechinoidea; Echinacea; Echinoida;
            Strongylocentrotidae; Strongylocentrotus.
REFERENCE   1  (bases 1 to 495)
  AUTHORS   Cameron,R.A., Mahairas,G., Rast,J.P., Martinez,P., Biondi,T.R.,
            Swartzell,S., Wallace,J.C., Poustka,A.J., Livingston,B.T., Wray
            ,G.A., Ettensohn,C.A., Lehrach,H., Britten,R.J, Davidson,E.H. and
            Hood,L.
  TITLE     A sea urchin genome project: Sequence scan, virtual map, and
            additional resources
  JOURNAL   Proc. Natl. Acad. Sci. U.S.A. 97 (17), 9514-9518 (2000)
  MEDLINE   20402566
   PUBMED   10920195
COMMENT     Contact: Cameron, RA, Davidson, EH, Hood, L
            Division of Biology 156-29
            California Institute of Technology
            Pasadena California 91125, USA
            Tel: (626) 395-8421
            Fax: (626) 793-3047
            Email: acameron@caltech.edu
            Plate: 45  row: E  column: 7
            Seq primer: SP6
            Class: BAC ends
            High quality sequence stop: 495.
FEATURES             Location/Qualifiers
     source          1. .495
                     /organism="Strongylocentrotus purpuratus"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:7668"
                     /clone="Plate=45 Col=7 Row=E"
                     /clone_lib="Strongylocentrotus purpuratus, purple sea
                     urchin, sperm genomic BAC library"
                     /note="Organ: sperm; Vector: BACe3.6; BAC Clones in E-Coli
                     DH10B"
BASE COUNT      114 a    132 c     96 g    146 t      7 others
ORIGIN

  Query Match             93.8%;  Score 15;  DB 28;  Length 495;
  Best Local Similarity   100.0%;  Pred. No. 66;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 CTCTGGAGCGTTCTC 16
              ||||||||||||||||
Db        311 CTCTGGAGCGTTCTC 325


RESULT 6
D59115
LOCUS       D59115                  322 bp    mRNA    linear   EST 30-AUG-1995
DEFINITION  HUM522B03B Clontech human placenta polyA+ mRNA (#6518) Homo sapiens
            cDNA clone GEN-522B03 5', mRNA sequence.
ACCESSION   D59115
VERSION     D59115.1  GI:968749
KEYWORDS    EST.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 322)
  AUTHORS   Fujiwara,T., Hirano,H., Katagiri,T., Kawai,A., Kuga,Y., Nagata,M.,
            Okuno,S., Ozaki,K., Shimizu,F., Shimada,Y., Shinomiya,H., Takaichi
            ,A., Takeda,S., Watanabe,T., Takahashi,E., Hirai,Y., Maekawa,H.,
            Shin,S. and Nakamura,Y.
  TITLE     Fujiwara et al. (1995)
  JOURNAL   Unpublished
COMMENT     Contact: Tsutomu Fujiwara
            Otsuka GEN Research Institute
            Otsuka Pharmaceutical Co.,Ltd
            463-10 kagasuno Kawauchi-cho, Tokushima, Tokushima, 771-01 Japan
            Tel: 0886-65-2888
            Fax: 0886-37-1035.
FEATURES             Location/Qualifiers
     source          1. .322
                     /organism="Homo sapiens"
                     /mol_type="mRNA"
                     /db_xref="taxon:9606"
                     /clone="GEN-522B03"
                     /clone_lib="Clontech human placenta polyA+ mRNA (#6518)"
```

```
BASE COUNT       86 a     66 c     93 g     77 t
ORIGIN

  Query Match             87.5%;  Score 14;  DB 14;  Length 322;
  Best Local Similarity   100.0%;  Pred. No. 2.4e+02;
  Matches   14;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          3 TCTGGAGCGTTCTC 16
              ||||||||||||||
Db        296 TCTGGAGCGTTCTC 309


RESULT 7
BF811540/c
LOCUS       BF811540                351 bp    mRNA    linear   EST 12-JAN-2001
DEFINITION  CM2-CI0179-201100-537-a10 CI0179 Homo sapiens cDNA, mRNA sequence.
ACCESSION   BF811540
VERSION     BF811540.1  GI:12140674
KEYWORDS    EST.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 351)
  AUTHORS   Dias Neto,E., Garcia Correa,R., Verjovski-Almeida,S., Briones,M.R.,
            Nagai,M.A., da Silva,W. Jr., Zago,M.A., Bordin,S., Costa,F.F.,
            Goldman,G.H., Carvalho,A.F., Matsukuma,A., Baia,G.S., Simpson,D.H.,
            Brunstein,A., deOliveira,P.S., Bucher,P., Jongeneel,C.V., O'Hare
            ,M.J., Soares,F., Brentani,R.R., Reis,L.F., de Souza,S.J. and
            Simpson,A.J.
  TITLE     Shotgun sequencing of the human transcriptome with ORF expressed
            sequence tags
  JOURNAL   Proc. Natl. Acad. Sci. U.S.A. 97 (7), 3491-3496 (2000)
  MEDLINE   20202663
   PUBMED   10737800
COMMENT     Contact: Simpson A.J.G.
            Laboratory of Cancer Genetics
            Ludwig Institute for Cancer Research
            Rua Prof. Antonio Prudente 109, 4 andar, 01509-010, Sao Paulo-SP,
            Brazil
            Tel: +55-11-2704922
            Fax: +55-11-2707001
            Email: asimpson@ludwig.org.br
            This sequence was derived from the FAPESP/LICR Human Cancer Genome
            Project. This entry can be seen in the following URL
            (http://www.ludwig.org.br/scripts/gethtml2.pl?t1=CM2&t2=CM2-CI0179-
            201100-537-a10&t3=2000-11-20&t4=1)
            Seq primer: puc 18 forward
            High quality sequence start: 18
            High quality sequence stop: 351.
FEATURES             Location/Qualifiers
     source          1. .351
                     /organism="Homo sapiens"
                     /mol_type="mRNA"
                     /db_xref="taxon:9606"
                     /dev_stage="Adult"
                     /clone_lib="CI0179"
                     /note="Organ: colon_ins; Vector: puc18; Site_1: SmaI;
                     Site_2: SmaI; A mini-library was made by cloning products
                     derived from  ORESTES PCR (U.S. Letters Patent application
                     No. 196,716 -  Ludwig Institute for Cancer Research)
                     profiles into  the pUC 18 vector. Reverse transcription of
                     tissue mRNA and cDNA amplification were performed under
                     low stringency conditions."
BASE COUNT      100 a     80 c     87 g     84 t
ORIGIN

  Query Match             87.5%;  Score 14;  DB 10;  Length 351;
  Best Local Similarity   100.0%;  Pred. No. 2.4e+02;
  Matches   14;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 CTCTGGAGCGTTCT 15
              ||||||||||||||
Db        346 CTCTGGAGCGTTCT 333


RESULT 8
BE555509
LOCUS       BE555509                357 bp    mRNA    linear   EST 04-DEC-2001
DEFINITION  sp90c02.y1 Gm-c1045 Glycine max cDNA clone GENOME SYSTEMS CLONE ID:
            Gm-c1045-891 5' similar to SW:SFR1_ARATH O22315 PRE-MRNA SPLICING
            FACTOR SF2 ;, mRNA sequence.
ACCESSION   BE555509
VERSION     BE555509.1  GI:9819996
KEYWORDS    EST.
SOURCE      Glycine max (soybean)
  ORGANISM  Glycine max
            Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
            Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; rosids
            ; eurosids I; Fabales; Fabaceae; Papilionoideae; Phaseoleae;
            Glycine.
REFERENCE   1  (bases 1 to 357)
  AUTHORS   Shoemaker,R., Keim,P., Vodkin,L., Erpelding,J., Coryell,V., Khanna
            ,A., Bolla,B., Marra,M., Hillier,L., Kucaba,T., Martin,J., Beck,C.,
            Wylie,T., Underwood,K., Steptoe,M., Theising,B., Allen,M., Bowers
            ,Y., Person,B., Swaller,T., Gibbons,M., Pape,D., Harvey,N., Schurk
            ,R., Ritter,E., Kohn,S., Shin,T., Jackson,Y., Cardenas,M., McCann
            ,R., Waterston,R. and Wilson,R.
  TITLE     Public Soybean EST Project
  JOURNAL   Unpublished
COMMENT     Contact: Shoemaker R/Public Soybean EST Project
            Public Soybean EST Project
            Washington University School of Medicine
            4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108, USA
            Tel: 314 286 1800
            Fax: 314 286 1810
            Email: est@watson.wustl.edu
            This clone is available through: ResGen, Invitrogen Corp. 2130
            South Memorial Parkway Huntsville, AL 35801 For further information
            call: (800)-533-4363 or contact via email: ccu@resgen.com
            Insert Length: 748   Std Error: 0.00
            High quality sequence stop: 353.
FEATURES             Location/Qualifiers
     source          1. .357
                     /organism="Glycine max"
                     /mol_type="mRNA"
                     /db_xref="taxon:3847"
                     /clone="GENOME SYSTEMS CLONE ID: Gm-c1045-891"
                     /tissue_type="Hypocotyl, 9-10 day old etiolated seedlings"
                     /lab_host="DH10B"
                     /clone_lib="Gm-c1045"
                     /note="Vector: pBluescriptII SK+; Site_1: EcoRI; Site_2:
                     XhoI; This cDNA library was constructed from mRNA isolated
                     from etiolated hypocotyl tissue of 9-10 day old seedlings
                     of the cultivar Williams 82. Complementary  DNA was
                     synthesized from mRNA using a primer consisting of a
                     poly(dT) primer  with a XhoI restriction site. EcoRI
                     adapters were ligated to the blunt-ended  cDNA fragments
                     followed by digestion with EcoRI and XhoI. The cDNA
                     fragments  were directionally cloned into the EcoRI-XhoI
                     restriction site of the  pBluescript vector. The ligated
                     cDNA fragments were transformed into DH10B  host cells
                     (Gibco BRL). This library was constructed by Dr. Randy
                     Shoemaker."
BASE COUNT       98 a     76 c     91 g     92 t
ORIGIN

  Query Match             87.5%;  Score 14;  DB 10;  Length 357;
  Best Local Similarity   100.0%;  Pred. No. 2.4e+02;
  Matches   14;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 CTCTGGAGCGTTCT 15
              ||||||||||||||
Db        241 CTCTGGAGCGTTCT 254
```

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RESULT 9
T04093/c
LOCUS       T04093                386 bp    mRNA    linear   EST 06-NOV-1997
DEFINITION  43 Lambda-PRL1 Arabidopsis thaliana cDNA clone SCF10T7P, mRNA
            sequence.
ACCESSION   T04093
VERSION     T04093.1  GI:315253
KEYWORDS    EST.
SOURCE      Arabidopsis thaliana (thale cress)
  ORGANISM  Arabidopsis thaliana
            Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
            Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; rosids
            ; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
REFERENCE   1  (bases 1 to 386)
  AUTHORS   Newman,T., deBruijn,F.J., Green,P., Keegstra,K., Kende,H., McIntosh
            ,L., Ohlrogge,J., Raikhel,N., Somerville,S., Thomashow,M., Retzel
            ,E. and Somerville,C.
  TITLE     Genes galore: a summary of methods for accessing results from
            large-scale partial sequencing of anonymous Arabidopsis cDNA clones
  JOURNAL   Plant Physiol. 106, 1241-1255 (1994)
  MEDLINE   95148729
   PUBMED   7846151
COMMENT     Contact: Thomas Newman
            MSU-DOE Plant Research Laboratory
            Michigan State University
            MSU-DOE-PRL, Michigan State University,Plant Biology Bldg.,E.
            Lansing,Mi
            Tel: 517-353-0854
            Fax: 517-353-9168
            Email: 22313tcn@ibm.cl.msu.edu.
FEATURES             Location/Qualifiers
     source          1. .386
                     /organism="Arabidopsis thaliana"
                     /mol_type="mRNA"
                     /strain="var columbia"
                     /db_xref="taxon:3702"
                     /clone="SCF10T7P"
                     /clone_lib="Lambda-PRL1"
                     /note="Vector: Lambda Shlox-1; Site_1: EcoRI; Site_2:
                     HindIII; Lambda PRL1 is a cDNA library derived from equal
                     quantities of 4 pools of mRNA.  The mRNA sources were 1) 7
                     day germinated etiolated seedlings; 2) tissue culture
                     grown roots; 3) staged plants half with 24 hour light
                     cycle, half on 16 hr light, 8 hour dark- rosettes;  4)
                     same plants as 3 but aerial tissue (stems, flowers and
                     siliques.  The library was made in Novagen's Lambda
                     Shlox-1 with (oligo dT primed) directional inserts cloned
                     between the EcoRI and HindIII sites. "
BASE COUNT       84 a    114 c     78 g    110 t
ORIGIN

  Query Match             87.5%;  Score 14;  DB 14;  Length 386;
  Best Local Similarity   100.0%;  Pred. No. 2.5e+02;
  Matches   14;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          3 TCTGGAGCGTTCTC 16
              ||||||||||||||
Db        303 TCTGGAGCGTTCTC 290


RESULT 10
BE652060/c
LOCUS       BE652060                407 bp    mRNA    linear   EST 06-SEP-2000
DEFINITION  UI-M-AO0-aby-a-09-0-UI.r1 NIH_BMAP_MPG Mus musculus cDNA clone
            UI-M-AO0-aby-a-09-0-UI 5', mRNA sequence.
ACCESSION   BE652060
VERSION     BE652060.1  GI:9977897
KEYWORDS    EST.
SOURCE      Mus musculus (house mouse)
  ORGANISM  Mus musculus
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
REFERENCE   1  (bases 1 to 407)
  AUTHORS   Bonaldo,M.F., Lennon,G. and Soares,M.B.
  TITLE     Normalization and subtraction: two approaches to facilitate gene
            discovery
  JOURNAL   Genome Res. 6 (9), 791-806 (1996)
  MEDLINE   97044477
   PUBMED   8889548
COMMENT     Contact: Chin, H
            National Institute of Mental Health
            6001 Executive Blvd. Room 7N-7190, MSC 9643, Bethesda, MD
            20892-9643, USA
            Tel: 301 443 1706
            Fax: 301 443 9890
            Email: mEST@mail.nih.gov
            cDNA Library Preparation: M.B. Soares Lab Clone distribution:
            Researchers may obtain BMAP cDNA clones from RESEARCH GENETICS. It
            should be noted that Bento Soares is generating a small number of
            additional specialized non-redundant arrays of BMAP cDNAs whose
            availability will be considered under appropriate and limited
            collaborative arrangements
            Seq primer: M13 Reverse.
FEATURES             Location/Qualifiers
     source          1. .407
                     /organism="Mus musculus"
                     /mol_type="mRNA"
                     /strain="C57BL/6J"
                     /db_xref="taxon:10090"
                     /clone="UI-M-AO0-aby-a-09-0-UI"
                     /dev_stage="27-32 days"
                     /lab_host="DH10B (Life Technologies)"
                     /clone_lib="NIH_BMAP_MPG"
                     /note="Vector: pT7T3D-Pac (Pharmacia) with a modified
                     polylinker; Site_1: Not I; Site_2: Eco RI; The
                     NIH_BMAP_MPG library is a non-normalized library
                     constructed from  mouse pineal gland. The tag is a string
                     of 5 nucleotides present  between the Not I site and the
                     oligo-dT track.  The library was  constructed as described
                     by Bonaldo, Lennon and Soares,  Genome Research 6: 791-806
                     , 1996. Tissue provided by Ms. Annie Novakovich,
                     Zivic-Miller Laboratories."
BASE COUNT      100 a    121 c    105 g     81 t
ORIGIN

  Query Match             87.5%;  Score 14;  DB 10;  Length 407;
  Best Local Similarity   100.0%;  Pred. No. 2.5e+02;
  Matches   14;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 CTCTGGAGCGTTCT 15
              ||||||||||||||
Db        261 CTCTGGAGCGTTCT 248


RESULT 11
AW414260/c
LOCUS       AW414260                411 bp    mRNA    linear   EST 09-FEB-2000
DEFINITION  uo96c11.y1 NCI_CGAP_Mam3 Mus musculus cDNA clone IMAGE:2650388 5'
            similar to gb:L19953 Mus musculus ERP mRNA, complete cds (MOUSE);,
            mRNA sequence.
ACCESSION   AW414260
VERSION     AW414260.1  GI:6940505
KEYWORDS    EST.
SOURCE      Mus musculus (house mouse)
  ORGANISM  Mus musculus
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
REFERENCE   1  (bases 1 to 411)
  AUTHORS   NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
  TITLE     National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
            Tumor Gene Index
  JOURNAL   Unpublished
COMMENT     Contact: Robert Strausberg, Ph.D.
            Email: cgapbs-r@mail.nih.gov
            Tissue Procurement: Lothar Hennighausen Ph.D., Chu-Xia Deng Ph.D.
            cDNA Library Preparation: Life Technologies, Inc.
```

cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Washington University Genome Sequencing Center
Clone distribution: NCI-CGAP clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
www-bio.llnl.gov/bbrp/image/image.html

MGI:1030840
Seq primer: -40RP from Gibco
High quality sequence stop: 186.

FEATURES Location/Qualifiers
source 1. .411
/organism="Mus musculus"
/mol_type="mRNA"
/strain="129,C57BL/6J,FVB/N"
/db_xref="taxon:10090"
/clone="IMAGE:2650388"
/tissue_type="tumor, gross tissue"
/dev_stage="10 months"
/lab_host="DH10B"
/clone_lib="NCI_CGAP_Mam3"
/note="Organ: mammary; Vector: pCMV-SPORT6; Site_1: SalI; Site_2: NotI; Cloned unidirectionally. Primer: Oligo dT. Library constructed by Life Technologies. Investigators providing samples: Lothar Hennighausen/Chu-Xia Deng, NIH Reference for transgenic model: Xu et al., Nature Genetics 22, 37-43 (1999)."

BASE COUNT 103 a 122 c 107 g 79 t
ORIGIN

Query Match 87.5%; Score 14; DB 9; Length 411;
Best Local Similarity 100.0%; Pred. No. 2.5e+02;
Matches 14; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 2 CTCTGGAGCGTTCT 15
||||||||||||||
Db 273 CTCTGGAGCGTTCT 260

RESULT 12
AZ857020/c
LOCUS AZ857020 422 bp DNA linear GSS 21-FEB-2001
DEFINITION 2M0161I09R Mouse 10kb plasmid UUGC1M library Mus musculus genomic clone UUGC2M0161I09 R, genomic survey sequence.
ACCESSION AZ857020
VERSION AZ857020.1 GI:13048590
KEYWORDS GSS.
SOURCE Mus musculus (house mouse)
ORGANISM Mus musculus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
REFERENCE 1 (bases 1 to 422)
AUTHORS Dunn,D., Aoyagi,A., Barber,M., Beacorn,T., Duval,B., Hamil,C., Islam,H., Longacre,S., Mahmoud,M., Meenen,E., Pedersen,T., Reilly,M., Rose,M., Rose,R., Stokes,R., Tingey,A., von Niederhausern,A. and Wright,D.,Weiss,R.
TITLE Mouse whole genome scaffolding with paired end reads from 10kb plasmid inserts
JOURNAL Unpublished
COMMENT Contact: Robert B. Weiss
University of Utah Genome Center
University of Utah
Rm. 308, Biomedical Polymers Research Bldg., 20 S. 2030 E., SLC, UT 84112, USA
Tel: 801 585 5606
Fax: 801 585 7177
Email: ddunn@genetics.utah.edu
Insert Length: 10000 Std Error: 0.00
Plate: 0161 row: I column: 09
Seq primer: CACACAGGAAACAGCTATGACC
Class: plasmid ends
High quality sequence stop: 422.

FEATURES Location/Qualifiers
source 1. .422
/organism="Mus musculus"
/mol_type="genomic DNA"
/strain="C57BL/6J"
/db_xref="taxon:10090"
/clone="UUGC2M0161I09"
/sex="Male"
/lab_host="E. Coli strain XL10-Gold, T1-resistant, F-"
/clone_lib="Mouse 10kb plasmid UUGC1M library"
/note="Vector: PWD42nv; Purified genomic DNA from M. musculus C57BL/6J (male) was obtained from the Jackson Laboratory Mouse DNA Resource (http://www.jax.org/resources/documents/dnares/). The DNA was hydrodynamically sheared by repeated passage through a 0.005 inch orifice at constant velocity. The sheared DNA was blunt end-repaired with T4 DNA polymerase and T4 polynucleotide kinase. Adaptor oligonucleotides were ligated to the blunt ends in high molar excess. The adaptored DNA was purified and size-selected for a 9.5 to 10.5 kb range using preparative agarose gel electrophoresis. Vector DNA was prepared from a derivative of pWD42 (gi|4732114|gb|AF129072.1), a copy-number inducible derivative of plasmid R1. The vector was ligated with adaptors complementary to the insert adaptors and purified. The sheared, adaptored mouse DNA was annealed to adaptored vector DNA, and transformed into chemically-competent E. coli XL10-Gold (Stratagene) cells and selected for ampicillin resistance."

BASE COUNT 82 a 104 c 130 g 106 t
ORIGIN

Query Match 87.5%; Score 14; DB 28; Length 422;
Best Local Similarity 100.0%; Pred. No. 2.5e+02;
Matches 14; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 ACTCTGGAGCGTTC 14
||||||||||||||
Db 122 ACTCTGGAGCGTTC 109

RESULT 13
CA938841
LOCUS CA938841 427 bp mRNA linear EST 30-DEC-2002
DEFINITION sav38f12.y1 Gm-c1069 Glycine max cDNA clone SOYBEAN CLONE ID: Gm-c1069-5639 5', mRNA sequence.
ACCESSION CA938841
VERSION CA938841.1 GI:27427321
KEYWORDS EST.
SOURCE Glycine max (soybean)
ORGANISM Glycine max
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; rosids; eurosids I; Fabales; Fabaceae; Papilionoideae; Phaseoleae; Glycine.
REFERENCE 1 (bases 1 to 427)
AUTHORS Shoemaker,R., Keim,P., Vodkin,L., Erpelding,J., Coryell,V., Khanna,A., Bolla,B., Marra,M., Hillier,L., Kucaba,T., Martin,J., Beck,C., Wylie,T., Underwood,K., Steptoe,M., Theising,B., Allen,M., Bowers,Y., Person,B., Swaller,T., Gibbons,M., Pape,D., Harvey,N., Schurk,R., Ritter,E., Kohn,S., Shin,T., Jackson,Y., Cardenas,M., McCann,R., Waterston,R. and Wilson,R.
TITLE Public Soybean EST Project
JOURNAL Unpublished
COMMENT Contact: Shoemaker R/Public Soybean EST Project
Public Soybean EST Project
Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108, USA
Tel: 314 286 1800
Fax: 314 286 1810
Email: est@watson.wustl.edu
This clone is available through: ResGen, Invitrogen Corp. 2130 South Memorial Parkway Huntsville, AL 35801 For further information call: (800)-533-4363 or contact: ccu@resgen.com web site: www.resgen.com

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           Seq primer: -40RP from Gibco
           High quality sequence stop: 426.
FEATURES             Location/Qualifiers
     source          1. .427
                     /organism="Glycine max"
                     /mol_type="mRNA"
                     /db_xref="taxon:3847"
                     /clone="SOYBEAN CLONE ID: Gm-c1069-5639"
                     /tissue_type="Degenerating cotyledons, 9-10 day old
                     etiolated seedling"
                     /lab_host="DH10B"
                     /clone_lib="Gm-c1069"
                     /note="Vector: pBluescript II SK+; Site_1: EcoRI; Site_2:
                     XhoI; The cDNA library was constructed from mRNA isolated
                     from degenerating cotyledons of 9-10 day old etiolated
                     seedlings for the cultivar Williams. Complementary DNA was
                     synthesized from mRNA using a primer consisting of a
                     poly(dT) sequence with a XhoI restriction site. EcoRI
                     adapters were ligated to the blunt-ended cDNA fragments
                     followed by XhoI digestion. The cDNA fragments were
                     directionally cloned into the EcoRI-XhoI restriction site
                     of the pBluescript vector. The ligated cDNA fragments
                     were transformed into DH10B host cells (GibcoBRL). This
                     library was constructed in the laboratory of Dr. Randy
                     Shoemaker."
BASE COUNT       96 a    111 c     50 g    170 t
ORIGIN

  Query Match             87.5%;  Score 14;  DB 14;  Length 427;
  Best Local Similarity   100.0%;  Pred. No. 2.6e+02;
  Matches   14;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 CTCTGGAGCGTTCT 15
              ||||||||||||||
Db        276 CTCTGGAGCGTTCT 289


RESULT 14
BU973804/c
LOCUS       BU973804                435 bp    mRNA    linear   EST 22-OCT-2002
DEFINITION  HB26A09r BC Hordeum vulgare subsp. vulgare cDNA clone HB26A09
            5-PRIME, mRNA sequence.
ACCESSION   BU973804
VERSION     BU973804.1  GI:24224597
KEYWORDS    EST.
SOURCE      Hordeum vulgare subsp. vulgare
  ORGANISM  Hordeum vulgare subsp. vulgare
            Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
            Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooideae
            ; Triticeae; Hordeum.
REFERENCE   1  (bases 1 to 435)
  AUTHORS   Radchuk,V., Zhang,H., Weschke,W., Potokina,E. and Wobus,U.
  TITLE     Barley ESTs from developing seeds
  JOURNAL   Unpublished
COMMENT     Contact: Stein Nils
            Molecular Markers Group, Department Genbank
            Institute of Plant Genetics and Crop Plant Research (IPK)
            Corrensstr. 3, 06466, Gatersleben, Germany
            Tel: 039482-5522
            Fax: 039482-5595
            Email: stein@ipk-gatersleben.de
            Insert Length: 435   Std Error: 0.00
            Plate: 26  row: A  column: 9
            Seq primer: M13rev.
FEATURES             Location/Qualifiers
     source          1. .435
                     /organism="Hordeum vulgare subsp. vulgare"
                     /mol_type="mRNA"
                     /cultivar="barke"
                     /db_xref="GABI:238650"
                     /db_xref="taxon:112509"
                     /clone="HB26A09"
                     /tissue_type="developing caryopsis"
                     /dev_stage="8-15 DAP (days after pollination)"
                     /lab_host="XL10-Gold"
                     /clone_lib="BC"
                     /note="Vector: pBluescript SK+; Site_1: EcoRI (5'-end of
                     cDNA); Site_2: XhoI (3'-end of cDNA); developing caryopsis
                     , 8-15 DAP(days after pollination) Due to a cloning
                     artefact caused by the kit, in most cases the EcoRI site
                     is NOT present, as well as the EcoRIadapter used for
                     cloning. To excise the insert, restriction sites upstream
                     EcoRI should be used (e.g. BamHI, SalI,PstI). NOTE: Also
                     due to the cloning system used Blue/white selection for
                     recombinats is not 100% reliable."
BASE COUNT       85 a    125 c    128 g     90 t      7 others
ORIGIN

  Query Match             87.5%;  Score 14;  DB 13;  Length 435;
  Best Local Similarity   100.0%;  Pred. No. 2.6e+02;
  Matches   14;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 CTCTGGAGCGTTCT 15
              ||||||||||||||
Db        268 CTCTGGAGCGTTCT 255


RESULT 15
BQ467058
LOCUS       BQ467058                442 bp    mRNA    linear   EST 30-MAY-2002
DEFINITION  HS02H04r HS Hordeum vulgare subsp. vulgare cDNA clone HS02H04
            5-PRIME, mRNA sequence.
ACCESSION   BQ467058
VERSION     BQ467058.1  GI:21274840
KEYWORDS    EST.
SOURCE      Hordeum vulgare subsp. vulgare
  ORGANISM  Hordeum vulgare subsp. vulgare
            Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
            Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooideae
            ; Triticeae; Hordeum.
REFERENCE   1  (bases 1 to 442)
  AUTHORS   Zhang,H., Potokina,E., Michalek,W., Weschke,W., Stein,N. and Graner
            ,A.
  TITLE     Barley ESTs from germinating seeds
  JOURNAL   Unpublished
COMMENT     Contact: Stein Nils
            Molecular Markers Group, Department Genbank
            Institute of Plant Genetics and Crop Plant Research (IPK)
            Corrensstr. 3, 06466, Gatersleben, Germany
            Tel: 039482-5522
            Fax: 039482-5595
            Email: stein@ipk-gatersleben.de
            Insert Length: 442   Std Error: 0.00
            Plate: 2  row: H  column: 4
            Seq primer: M13rev.
FEATURES             Location/Qualifiers
     source          1. .442
                     /organism="Hordeum vulgare subsp. vulgare"
                     /mol_type="mRNA"
                     /cultivar="barke"
                     /db_xref="taxon:112509"
                     /clone="HS02H04"
                     /tissue_type="embryo + scutellum"
                     /dev_stage="0-16 hours after imbibition"
                     /lab_host="XL10-Gold"
                     /clone_lib="HS"
                     /note="Vector: pBluescript SK+; Site_1: EcoRI (5'-end of
                     cDNA); Site_2: XhoI (3'-end of cDNA); Due to a cloning
                     artefact caused by the kit, in most cases the EcoRI site
                     is NOT present, as well as the EcoRIadapter used for
                     cloning. To excise the insert, restriction sites upstream
                     EcoRI should be used (e.g. BamHI, SalI,PstI). NOTE: Also
                     due to the cloning system used Blue/white selection for
                     recombinats is not 100% reliable."
BASE COUNT       40 a    149 c    165 g     88 t
ORIGIN
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Query Match 87.5%; Score 14; DB 13; Length 442;
Best Local Similarity 100.0%; Pred. No. 2.6e+02;
Matches 14; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          3 TCTGGAGCGTTCTC 16
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Db        399 TCTGGAGCGTTCTC 412
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Search completed: January 20, 2004, 20:01:29
Job time : 988.412 secs

GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: January 20, 2004, 16:34:44 ; Search time 565.176 Seconds
(without alignments)
1158.141 Million cell updates/sec

Title: US-10-068-160-73
Perfect score: 16
Sequence: 1 actctggagcgttctc 16

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 2888711 seqs, 20454813386 residues

Total number of hits satisfying chosen parameters: 5777422

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : GenEmbl:*
1: gb_ba:*
2: gb_htg:*
3: gb_in:*
4: gb_om:*
5: gb_ov:*
6: gb_pat:*
7: gb_ph:*
8: gb_pl:*
9: gb_pr:*
10: gb_ro:*
11: gb_sts:*
12: gb_sy:*
13: gb_un:*
14: gb_vi:*
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16: em_fun:*
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28: em_un:*
29: em_vi:*
30: em_htg_hum:*
31: em_htg_inv:*
32: em_htg_other:*
33: em_htg_mus:*
34: em_htg_pln:*
35: em_htg_rod:*
36: em_htg_mam:*
37: em_htg_vrt:*
38: em_sy:*
39: em_htgo_hum:*
40: em_htgo_mus:*
41: em_htgo_other:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.		Score	% Query Match	Length	DB	ID	Description
c	1	15	93.8	1125	6	AX123430	AX123430 Sequence
c	2	15	93.8	1125	6	BD165547	BD165547 Novel pol
c	3	15	93.8	1230	6	AX428867	AX428867 Sequence
c	4	15	93.8	1230	6	AX429521	AX429521 Sequence
	5	15	93.8	1753	8	ATCYC3B	Z31402 A.thaliana
c	6	15	93.8	2658	10	MMNETRN	Z32815 M.musculus
c	7	15	93.8	101715	8	ATF4D11	AL022537 Arabidops
	8	15	93.8	110000	2	AC132232_1	Continuation (2 of
c	9	15	93.8	110992	8	ATF2I11	AL360314 Arabidops
	10	15	93.8	128789	2	AC113911	AC113911 Rattus no
	11	15	93.8	143779	2	AP004750	AP004750 Oryza sat
c	12	15	93.8	171351	2	AC119218	AC119218 Mus muscu
	13	15	93.8	172305	2	AC119639	AC119639 Rattus no
	14	15	93.8	176146	2	AC023124	AC023124 Homo sapi
	15	15	93.8	197252	8	ATCHRIV77	AL161581 Arabidops
	16	15	93.8	199450	9	AC005674	AC005674 Homo sapi
c	17	15	93.8	207184	9	AC012361	AC012361 Homo sapi
	18	15	93.8	215789	2	AC103449	AC103449 Rattus no
c	19	15	93.8	234627	2	AC106118	AC106118 Rattus no
	20	15	93.8	235139	2	AC132335	AC132335 Mus muscu
	21	15	93.8	236455	2	AC135714	AC135714 Rattus no
	22	15	93.8	237078	2	AC094917	AC094917 Rattus no
c	23	15	93.8	240000	2	AC009528	AC009528 Homo sapi
	24	15	93.8	248106	2	AC126818	AC126818 Rattus no
	25	15	93.8	254169	2	AC127720	AC127720 Rattus no
	26	15	93.8	309400	6	AX127153	AX127153 Sequence
c	27	15	93.8	310029	1	AE016861	AE016861 Pseudomon
	28	15	93.8	325651	1	AP005283	AP005283 Corynebac
	29	14.4	90.0	16	6	AX194407	AX194407 Sequence
	30	14.4	90.0	16	6	AX352259	AX352259 Sequence
	31	14.4	90.0	16	6	AX352273	AX352273 Sequence
	32	14.4	90.0	16	6	AX352300	AX352300 Sequence
	33	14.4	90.0	16	6	AX465357	AX465357 Sequence
	34	14.4	90.0	17	6	AX194414	AX194414 Sequence
	35	14.4	90.0	17	6	AX465364	AX465364 Sequence
	36	14.4	90.0	18	6	AX104532	AX104532 Sequence
	37	14.4	90.0	18	6	AX194411	AX194411 Sequence
	38	14.4	90.0	18	6	AX355160	AX355160 Sequence
	39	14.4	90.0	18	6	AX465361	AX465361 Sequence
	40	14.4	90.0	18	6	AX547585	AX547585 Sequence
	41	14.4	90.0	19	6	AX194405	AX194405 Sequence
	42	14.4	90.0	19	6	AX352258	AX352258 Sequence
	43	14.4	90.0	19	6	AX352272	AX352272 Sequence
	44	14.4	90.0	19	6	AX352299	AX352299 Sequence
	45	14.4	90.0	19	6	AX465355	AX465355 Sequence

ALIGNMENTS

RESULT 1
AX123430/c
LOCUS AX123430 1125 bp DNA linear PAT 11-MAY-2001
DEFINITION Sequence 3346 from Patent EP1108790.
ACCESSION AX123430
VERSION AX123430.1 GI:14040918
KEYWORDS .
SOURCE Corynebacterium glutamicum
ORGANISM Corynebacterium glutamicum
Bacteria; Actinobacteria; Actinobacteridae; Actinomycetales;
Corynebacterineae; Corynebacteriaceae; Corynebacterium.
REFERENCE 1
AUTHORS Nakagawa,S., Mizoguchi,H., Ando,S., Hayashi,M., Ochiai,K.,
Yokoi,H., Tateishi,N., Senoh,A., Ikeda,M. and Ozaki,A.
TITLE Novel polynucleotides

```
  JOURNAL   Patent: EP 1108790-A 3346 20-JUN-2001;
            KYOWA HAKKO KOGYO CO., LTD. (JP)
FEATURES             Location/Qualifiers
     source          1. .1125
                     /organism="Corynebacterium glutamicum"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:1718"
BASE COUNT      273 a    355 c    283 g    214 t
ORIGIN

  Query Match             93.8%;  Score 15;  DB 6;  Length 1125;
  Best Local Similarity   100.0%;  Pred. No. 4.8e+02;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 CTCTGGAGCGTTCTC 16
              ||||||||||||||||
Db        372 CTCTGGAGCGTTCTC 358


RESULT 2
BD165547/c
LOCUS       BD165547                1125 bp    DNA     linear   PAT 17-JAN-2003
DEFINITION  Novel polynucleotide.
ACCESSION   BD165547
VERSION     BD165547.1  GI:27871359
KEYWORDS    JP 2002191370-A/3346.
SOURCE      unidentified
  ORGANISM  unidentified
            unclassified.
REFERENCE   1  (bases 1 to 1125)
  AUTHORS   Nakagawa,S., Mizoguchi,H., Ando,S., Hayashi,M., Ochiai,K.,
            Yokoi,H., Tateishi,N., Senoo,A., Ikeda,M. and Ozaki,A.
  TITLE     Novel polynucleotide
  JOURNAL   Patent: JP 2002191370-A 3346 09-JUL-2002;
            KYOWA HAKKO KOGYO CO LTD
COMMENT     OS   Corynebacterium glutamicum
            PN   JP 2002191370-A/3346
            PD   09-JUL-2002
            PF   15-DEC-2000 JP 2000405096
            PI   SATOSHI NAKAGAWA,HIROSHI MIZOGUCHI,SEIKO ANDO,MIKIO HAYASHI,
            PI   KEIKO OCHIAI,
            PI   HARUHIKO YOKOI,NAOKO TATEISHI,AKIHIRO SENOO,MASATO IKEDA,AKIO
            PI   OZAKI
            PC   C12N15/09,C12N15/09,C07K14/34,C07K16/12,C07K16/40,C12M1/00, PC
              C12N1/15,
            PC   C12N1/19,C12N1/21,C12N5/10,C12N9/00,C12N9/02,C12P7/40,C12P13/
            PC   04,C12P13/08,
            PC   C12P19/00,C12P19/34,C12P21/02,C12Q1/37,C12Q1/68,G01N33/53, PC
             G01N33/566,
            PC   G01N33/569,G01N33/68,G01N37/00//C12P21/08,(C12N1/21,C12R1:15),
            PC   (C12N1/21,C12R1:13),(C12N1/21,C12R1:01),(C12P13/08,C12R1:15),
            PC   C12N15/00,
            PC   C12N5/00,C12N15/00
            CC   Novel polynucleotide
            FH   Key             Location/Qualifiers
            FT   source          1. .1125
            FT                   /organism='Corynebacterium glutamicum'.
FEATURES             Location/Qualifiers
     source          1. .1125
                     /organism="unidentified"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32644"
BASE COUNT      273 a    355 c    283 g    214 t
ORIGIN

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  Best Local Similarity   100.0%;  Pred. No. 4.8e+02;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 CTCTGGAGCGTTCTC 16
              ||||||||||||||||
Db        372 CTCTGGAGCGTTCTC 358


RESULT 3
AX428867/c
LOCUS       AX428867                1230 bp    DNA     linear   PAT 21-JUN-2002
DEFINITION  Sequence 3 from Patent EP1202065.
ACCESSION   AX428867
VERSION     AX428867.1  GI:21540259
KEYWORDS    .
SOURCE      Mus musculus (house mouse)
  ORGANISM  Mus musculus
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
REFERENCE   1
  AUTHORS   Wasylyk,B., Multon,M.C., Ayadi,A. and Zheng,H.
  TITLE     Net, a transcription factor of the tcf family, as regulator of
            angiogenic expression
  JOURNAL   Patent: EP 1202065-A 3 02-MAY-2002;
            Aventis Pharma S.A. (FR) ; INSERM (FR)
FEATURES             Location/Qualifiers
     source          1. .1230
                     /organism="Mus musculus"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:10090"
     CDS             1. .1230
                     /note="Sequence of NET transcription factor"
                     /codon_start=1
                     /protein_id="CAD36073.1"
                     /db_xref="GI:21540260"
                     /translation="MESAITLWQFLLHLLLDQKHEHLICWTSNDGEFKLLKAEEVAKL
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                     ESLLLQDGDCKVSPEGREVHRHGLSSLKSASRNEYLHSGLYSSFTINSLENAPEAFKA
                     IKTEKLEEPCDDSPPVEEVRTVIRFVTNKTDKHITRPVMSLPSTSETAAAAASAFLAS
                     SVSAKISSLMLPNAASVSSVSPSSSRSPSLSPDSPLPSEHRSLFLEAACHESDSLEPL
                     NLSSGSKTKSPSLPPKGKKPKGLEISAPQLLLSGTDIGSIALNSPALPSGSLTPAFFT
                     AQTPSGLFLASSPLLPSIHFWSSLSPVAPLSPARLQGPNTLFQFPTLLNGHMPVPLPS
                     LDRAPSPVLLSPSSQKS"
BASE COUNT      278 a    415 c    285 g    252 t
ORIGIN

  Query Match             93.8%;  Score 15;  DB 6;  Length 1230;
  Best Local Similarity   100.0%;  Pred. No. 4.8e+02;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 CTCTGGAGCGTTCTC 16
              ||||||||||||||||
Db        468 CTCTGGAGCGTTCTC 454


RESULT 4
AX429521/c
LOCUS       AX429521                1230 bp    DNA     linear   PAT 21-JUN-2002
DEFINITION  Sequence 3 from Patent WO0235235.
ACCESSION   AX429521
VERSION     AX429521.1  GI:21540795
KEYWORDS    .
SOURCE      Mus musculus (house mouse)
  ORGANISM  Mus musculus
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
REFERENCE   1
  AUTHORS   Wasylyk,B., Zheng,H., Ayadi,A. and Multon,M.C.
  TITLE     Net, a transcription factor of the tcf family, as regulator of
            angiogenic expression
  JOURNAL   Patent: WO 0235235-A 3 02-MAY-2002;
            AVENTIS PHARMA SA (FR); INST NAT SANTE RECH MED (FR)
FEATURES             Location/Qualifiers
     source          1. .1230
                     /organism="Mus musculus"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:10090"
     CDS             1. .1230
                     /note="Sequence of NET transcription factor"
                     /codon_start=1
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                     /protein_id="CAD36125.1"
                     /db_xref="GI:21540796"
                     /translation="MESAITLWQFLLHLLLDQKHEHLICWTSNDGEFKLLKAEEVAKL
                     WGLRKNKTNMNYDKLSRALRYYYDKNIIKKVIGQKFVYKFVSFPDILKMDPHAVEISR
                     ESLLLQDGDCKVSPEGREVHRHGLSSLKSASRNEYLHSGLYSSFTINSLENAPEAFKA
                     IKTEKLEEPCDDSPPVEEVRTVIRFVTNKTDKHITRPVMSLPSTSETAAAAASAFLAS
                     SVSAKISSLMLPNAASVSSVSPSSSRSPSLSPDSPLPSEHRSLFLEAACHESDSLEPL
                     NLSSGSKTKSPSLPPKGKKPKGLEISAPQLLLSGTDIGSIALNSPALPSGSLTPAFFT
                     AQTPSGLFLASSPLLPSIHFWSSLSPVAPLSPARLQGPNTLFQFPTLLNGHMPVPLPS
                     LDRAPSPVLLSPSSQKS"
BASE COUNT      278 a    415 c    285 g    252 t
ORIGIN

  Query Match             93.8%;  Score 15;  DB 6;  Length 1230;
  Best Local Similarity   100.0%;  Pred. No. 4.8e+02;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 CTCTGGAGCGTTCTC 16
              ||||||||||||||||
Db        468 CTCTGGAGCGTTCTC 454


RESULT 5
ATCYC3B
LOCUS       ATCYC3B                 1753 bp    mRNA    linear   PLN 21-APR-1995
DEFINITION  A.thaliana (Columbia) cyc3b mRNA for cyclin 3b protein.
ACCESSION   Z31402
VERSION     Z31402.1  GI:728520
KEYWORDS    cyc3b gene; cyclin 3b.
SOURCE      Arabidopsis thaliana (thale cress)
  ORGANISM  Arabidopsis thaliana
            Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
            Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
            rosids; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
REFERENCE   1  (bases 1 to 1752)
  AUTHORS   Ferreira,P., Hemerly,A., de Almeida Engler,J., Bergounioux,C.,
            Burssens,S., Van Montagu,M., Engler,G. and Inze,D.
  TITLE     Three discrete classes of Arabidopsis cyclins are expressed during
            different intervals of the cell cycle
  JOURNAL   Proc. Natl. Acad. Sci. U.S.A. 91 (24), 11313-11317 (1994)
  MEDLINE   95062258
   PUBMED   7972055
REFERENCE   2
  AUTHORS   Van Montagu,M.
  TITLE     Direct Submission
  JOURNAL   Submitted (22-MAR-1994) Van Montagu M., Rijksuniverisiteit Gent,
            Laboratory of Genetics, Ledeganckstraat, 35, Gent, Belgium, B-9000
  REMARK    revised by [4]   MAT
REFERENCE   3  (bases 1 to 1753)
  AUTHORS   Van Montagu,M.
  TITLE     Direct Submission
  JOURNAL   Submitted (08-MAR-1995) Van Montagu M., Rijksuniverisiteit Gent,
            Laboratory of Genetics, Ledeganckstraat, 35, Gent, Belgium, B-9000
COMMENT     On Mar 25, 1995 this sequence version replaced gi:509426.
FEATURES             Location/Qualifiers
     source          1. .1753
                     /organism="Arabidopsis thaliana"
                     /mol_type="mRNA"
                     /strain="Columbia"
                     /db_xref="taxon:3702"
                     /clone="cyc3bAt"
                     /tissue_type="cell suspensions"
                     /clone_lib="cell suspension lambda ZapII"
     gene            1. .1753
                     /gene="cyc3b"
     CDS             141. .1451
                     /gene="cyc3b"
                     /codon_start=1
                     /product="cyclin 3b"
                     /protein_id="CAA83277.1"
                     /db_xref="GI:784946"
                     /db_xref="SPTREMBL:Q39073"
                     /translation="MYCSSSMHPNANKENISTSDVQESFVRITRSRAKKAMGRGVSIP
                     PTKPSFKQQKRRAVLKDVSNTSADIIYSELRKGGNIKANRKCLKEPKKAAKEGANSAM
                     DILVDMHTEKSKLAEDLSKIRMAEAQDVSLSNFKDEEITEQQEDGSGVMELLQVVDID
                     SNVEDPQCCSLYAADIYDNIHVAELQQRPLANYMELVQRDIDPDMRKILIDWLVEVSD
                     DYKLVPDTLYLTVNLIDRFLSNSYIERQRLQLLGVSCMLIASKYEELSAPGVEEFCFI
                     TANTYTRREVLSMEIQILNFVHFRLSVPTTKTFLRRFIKAAQASYKVPFIELEYLANY
                     LAELTLVEYSFLRFLPSLIAASAVFLARWTLDQTDHPWNPTLQHYTRYEVAELKNTVL
                     AMEDLQLNTSGCTLAATREKYNQPKFKSVAKLTSPKRVTLLFSR"
BASE COUNT      539 a    381 c    349 g    484 t
ORIGIN

  Query Match             93.8%;  Score 15;  DB 8;  Length 1753;
  Best Local Similarity   100.0%;  Pred. No. 4.9e+02;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 CTCTGGAGCGTTCTC 16
              ||||||||||||||||
Db         18 CTCTGGAGCGTTCTC 32


RESULT 6
MMNETRN/c
LOCUS       MMNETRN                 2658 bp    mRNA    linear   ROD 13-MAR-1995
DEFINITION  M.musculus net mRNA.
ACCESSION   Z32815
VERSION     Z32815.1  GI:479112
KEYWORDS    Net; ras gene.
SOURCE      Mus musculus (house mouse)
  ORGANISM  Mus musculus
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
REFERENCE   1  (bases 1 to 2658)
  AUTHORS   Giovane,A., Pintzas,A., Maira,S.M., Sobieszczuk,P. and Wasylyk,B.
  TITLE     Net, a new ets transcription factor that is activated by Ras
  JOURNAL   Genes Dev. 8 (13), 1502-1513 (1994)
  MEDLINE   95047310
   PUBMED   7958835
REFERENCE   2  (bases 1 to 2658)
  AUTHORS   Giovane,A., Pintzas,A., Maira,S.M., Sobieszczuk,P. and Wasylyk,B.
  TITLE     Net, a negative factor switch to positive by Ras
  JOURNAL   Unpublished
REFERENCE   3  (bases 1 to 2658)
  AUTHORS   Giovane,A.
  TITLE     Direct Submission
  JOURNAL   Submitted (29-APR-1994) Antoine Giovane,
            CNRS-LGME,INSERM-U.184,institut de Chimie, Biologique, 11 rue
            Humann, Strasbourg, 67085 Strasb. Cedex, France
FEATURES             Location/Qualifiers
     source          1. .2658
                     /organism="Mus musculus"
                     /mol_type="mRNA"
                     /db_xref="taxon:10090"
                     /tissue_type="embryo"
                     /clone_lib="lambda zap2"
                     /dev_stage="10 days"
     CDS             295. .1524
                     /codon_start=1
                     /product="Net"
                     /protein_id="CAA83676.1"
                     /db_xref="GI:479113"
                     /db_xref="MGI:101762"
                     /db_xref="SWISS-PROT:P41971"
                     /translation="MESAITLWQFLLHLLLDQKHEHLICWTSNDGEFKLLKAEEVAKL
                     WGLRKNKTNMNYDKLSRALRYYYDKNIIKKVIGQKFVYKFVSFPDILKMDPHAVEISR
                     ESLLLQDGDCKVSPEGREVHRHGLSSLKSASRNEYLHSGLYSSFTINSLENAPEAFKA
                     IKTEKLEEPCDDSPPVEEVRTVIRFVTNKTDKHITRPVMSLPSTSETAAAAASAFLAS
                     SVSAKISSLMLPNAASVSSVSPSSSRSPSLSPDSPLPSEHRSLFLEAACHESDSLEPL
                     NLSSGSKTKSPSLPPKGKKPKGLEISAPQLLLSGTDIGSIALNSPALPSGSLTPAFFT
                     AQTPSGLFLASSPLLPSIHFWSSLSPVAPLSPARLQGPNTLFQFPTLLNGHMPVPLPS
                     LDRAPSPVLLSPSSQKS"
BASE COUNT      682 a    714 c    600 g    662 t
ORIGIN

  Query Match             93.8%;  Score 15;  DB 10;  Length 2658;
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  Best Local Similarity   100.0%;  Pred. No. 5e+02;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 CTCTGGAGCGTTCTC 16
              ||||||||||||||||
Db        762 CTCTGGAGCGTTCTC 748


RESULT 7
ATF4D11/c
LOCUS       ATF4D11               101715 bp    DNA     linear   PLN 27-AUG-1999
DEFINITION  Arabidopsis thaliana DNA chromosome 4, BAC clone F4D11 (ESSAII
            project).
ACCESSION   AL022537
VERSION     AL022537.1  GI:3063690
KEYWORDS    .
SOURCE      Arabidopsis thaliana (thale cress)
  ORGANISM  Arabidopsis thaliana
            Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
            Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
            rosids; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
REFERENCE   1
  AUTHORS   Bevan,M., Benes,V., Rechmann,S., Borkova,D., Ansorge,W.,
            Hoheisel,J., Mewes,H.W., Mayer,K.F.X. and Schueller,C.
  JOURNAL   Unpublished
REFERENCE   2  (bases 1 to 101715)
  AUTHORS   EU Arabidopsis sequencing,project.
  TITLE     Direct Submission
  JOURNAL   Submitted (16-APR-1998) MIPS, at the Max-Planck-Institut fuer
            Biochemie, Am Klopferspitz 18a, D-82152 Martinsried, FRG, Project
            Coordinator: Mike Bevan, Molecular Genetics Department, Cambridge
            Laboratory, John Innes Centre, Colney Lane, NR4 7UJ Norwich, UK,
            E-mail: michael.bevan@bbsrc.ac.uk
FEATURES             Location/Qualifiers
     source          1. .101715
                     /organism="Arabidopsis thaliana"
                     /mol_type="genomic DNA"
                     /variety="Columbia"
                     /db_xref="taxon:3702"
                     /chromosome="4"
     gene            2154. .4496
                     /gene="F4D11.10"
     gene            complement(join(2154. .2813,2909. .3257,3625. .3755,
                     3855. .4496))
                     /gene="F4D11.10"
     CDS             complement(join(2154. .2813,2909. .3257,3625. .3755,
                     3855. .4496))
                     /gene="F4D11.10"
                     /note="similarity to multiple exostosis 2, Homo sapiens"
                     /codon_start=1
                     /product="putative protein"
                     /protein_id="CAA18582.1"
                     /db_xref="GI:3063691"
                     /db_xref="SPTREMBL:O65522"
                     /translation="MLNLWLREHLVYVCHQQNLVAKFRSQKAMKLLRFAGLVFIFITT
                     FQFVNIRYYGGDIFSLSSQDKFPVSIDVSTEPVSTLSGPERLNSSSSRSVEVDEEEST
                     GLKEDHVIGFDKNDTVQGHDSFVEDVKDKETLDLLPGTKSSSNESYEKIVEDADIAFE
                     NIRKMEILESKSDPSVDNLSSEVKKFMNVSNSGVVSITEMMNLLHQSRTSHVSLKVKR
                     SSTIDHELLYARTQIENPPLIENDPLLHTPLYWNLSMFKRSYELMEKKLKVYVYREGK
                     RPVLHKPVLKGIYASEGWFMKQLKSSRTFVTKDPRKAHLFYLPFSSKMLEETLYVPGS
                     HSDKNLIQFLKNYLDMISSKYSFWNKTGGSDHFLVACHDWAPSETRQYMAKCIRALCN
                     SDVSEGFVFGKDVALPETTILVPRRPLRALGGKPVSQRQILAFFAGGMHGYLRPLLLQ
                     NWGGNRDPDMKIFSEIPKSKGKKSYMEYMKSSKYCICPKGHEVNSPRVVEALFYECVP
                     VIISDNFVPPFFEVLNWESFAVFVLEKDIPDLKNILVSITEERYREMQMRVKMVQKHF
                     LWHSKPERFDIFHMILHSIWYNRVFQI"
     exon            complement(2154. .2813)
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     intron          complement(2814. .2908)
                     /gene="F4D11.10"
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     exon            complement(2909. .3257)
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                     /number=2
     intron          complement(3258. .3624)
                     /gene="F4D11.10"
                     /number=2
     exon            complement(3625. .3755)
                     /gene="F4D11.10"
                     /number=3
     intron          complement(3756. .3854)
                     /gene="F4D11.10"
                     /number=3
     exon            complement(3855. .4496)
                     /gene="F4D11.10"
                     /number=4
     gene            6155. .8136
                     /gene="F4D11.20"
     gene            complement(join(6155. .6547,7111. .7176,7846. .8006,
                     8082. .8136))
                     /gene="F4D11.20"
     CDS             complement(join(6155. .6547,7111. .7176,7846. .8006,
                     8082. .8136))
                     /gene="F4D11.20"
                     /note="similarity to predicted proteins, Arabidopsis
                     thaliana
                     Contains Prenyl group binding site (CAAX box), [CFLA]
                     contains EST gb:AA395096, T42550"
                     /codon_start=1
                     /product="putative protein"
                     /protein_id="CAA18583.1"
                     /db_xref="GI:3063692"
                     /db_xref="SPTREMBL:O65523"
                     /translation="MTSLHKTLFTQNPTTLDQLMMCHTGRDNSWKKLENIDEEGPSTV
                     AREVRTALPPETPTEMMEFLGRSWSISALLPHVGNKTSPPITPRTGREMKHLYKSMIR
                     GRTMGRRLKDQKEKKKQETRTRNAEIHAAVSVAGVAAVVAATAASNAIAAAEDAVEST
                     TVAAAMASAAALIASHCIEIAGEIGAGYNQIATAVSSATNARTNGDIMALTASAATGI
                     IYCFLA"
     exon            complement(6155. .6547)
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     intron          complement(6548. .7110)
                     /gene="F4D11.20"
                     /number=1
     exon            complement(7111. .7176)
                     /gene="F4D11.20"
                     /number=2
     intron          complement(7177. .7845)
                     /gene="F4D11.20"
                     /number=2
     exon            complement(7846. .8006)
                     /gene="F4D11.20"
                     /number=3
     intron          complement(8007. .8081)
                     /gene="F4D11.20"
                     /number=3
     exon            complement(8082. .8136)
                     /gene="F4D11.20"
                     /number=4
     gene            9271. .11609
                     /gene="F4D11.30"
     gene            complement(join(9271. .9522,9555. .9704,9801. .9917,
                     10008. .10115,10239. .10336,10486. .10655,10768. .10844,
                     11004. .11083,11294. .11609))
                     /gene="F4D11.30"
     CDS             complement(join(9271. .9522,9555. .9704,9801. .9917,
                     10008. .10115,10239. .10336,10486. .10655,10768. .10844,
                     11004. .11083,11294. .11609))
                     /gene="F4D11.30"
                     /note="similarity to predicted protein, Synechocystis sp.,
                     PIR2:S74814"
                     /codon_start=1
                     /product="putative protein"
                     /protein_id="CAA18584.1"
                     /db_xref="GI:3063693"
                     /db_xref="SPTREMBL:O65524"
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                     /translation="MQFNIREFFFLWLITYCLTFEKCRYHFDGTPRKFFEGWYFRVSI
                     PEKRESFCFMYSVENPAFRQSLSPLEVALYGPRFTGVGAQILGANDKYLCQYEQDSHN
                     FWGDRHELVLGNTFSAVPGAKAPNKEVPPEEFNRRVSEGFQATPFWHQGHICDDGRTD
                     YAETVKSARWEYSTRPVYGWGDVGAKQKSTAGWPAAFPVFEPHWQICMAGGLSTGWIE
                     WGGERFEFRDAPSYSEKNWGGGFPRKWFWVQCNVFEGATGEVALTAGGGLRQLPGLTE
                     TYENAALVCVHYDGKMYEFVPWNGVVRWEMSPWGYWYITAENENHVVELEARTNEAGT
                     PLRAPTTEVGLATACRDSCYGELKLQIWERLYDGSKGKLKVLTNPKAVKEDYERLLWL
                     TMMQVILETKSSMAAVEIGGGPWFGTWKGDTSNTPELLKQALQVPLDLESALGLVPFF
                     KPPGL"
     exon            complement(9271. .9522)
                     /gene="F4D11.30"
                     /number=1
     intron          complement(9523. .9554)
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     exon            complement(9555. .9704)
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                     /number=2
     intron          complement(9705. .9800)
                     /gene="F4D11.30"
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     intron          complement(9918. .10007)
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     exon            complement(10008. .10115)
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                     /number=4
     intron          complement(10116. .10238)
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     intron          complement(10337. .10485)
                     /gene="F4D11.30"
                     /number=5
     exon            complement(10486. .10655)
                     /gene="F4D11.30"
                     /number=6
     intron          complement(10656. .10767)
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     exon            complement(10768. .10844)
                     /gene="F4D11.30"
                     /number=7
     intron          complement(10845. .11003)
                     /gene="F4D11.30"
                     /number=7
     exon            complement(11004. .11083)
                     /gene="F4D11.30"
                     /number=8
     intron          complement(11084. .11293)
                     /gene="F4D11.30"
                     /number=8
     exon            complement(11294. .11609)
                     /gene="F4D11.30"
                     /number=9
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                     /note="tRNA"
     misc_feature    13108. .13310
                     /note="EST Z33951 matches to coordinates 13310 to 13108"

  Query Match             93.8%;  Score 15;  DB 8;  Length 101715;
  Best Local Similarity   100.0%;  Pred. No. 6e+02;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 CTCTGGAGCGTTCTC 16
              |||||||||||||||
Db      54640 CTCTGGAGCGTTCTC 54626
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RESULT 8
AC132232_1
WPCOMMENT
  Sequence split into 4 fragments  LOCUS AC132232 Accession AC132232
     Fragment Name      Begin     End
     AC132232_0             1    110000
     AC132232_1        100001    210000
     AC132232_2        200001    310000
     AC132232_3        300001    364255
Continuation (2 of 4) of AC132232 from base 100001 (AC132232 Mus musculus chromosome UN

  Query Match             93.8%;  Score 15;  DB 2;  Length 110000;
  Best Local Similarity   100.0%;  Pred. No. 6e+02;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 ACTCTGGAGCGTTCT 15
              |||||||||||||||
Db      79259 ACTCTGGAGCGTTCT 79273


RESULT 9
ATF2I11/c
LOCUS       ATF2I11               110992 bp    DNA     linear   PLN 05-JUL-2000
DEFINITION  Arabidopsis thaliana DNA chromosome 5, BAC clone F2I11 (ESSA
            project).
ACCESSION   AL360314
VERSION     AL360314.1  GI:8953373
KEYWORDS    .
SOURCE      Arabidopsis thaliana (thale cress)
  ORGANISM  Arabidopsis thaliana
            Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
            Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
            rosids; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
REFERENCE   1  (bases 1 to 3355)
  AUTHORS   Bevan,M., Volckaert,G., Grymonprez,B., Voet,M., Robben,J.,
            Bancroft,I., Mewes,H.W., Rudd,S., Lemcke,K. and Mayer,K.F.X.
  JOURNAL   Unpublished
REFERENCE   2  (bases 2885 to 110992)
  AUTHORS   Bevan,M., Peters,S.A., van Staveren,M., Dirkse,W., Stiekema,W.,
            Bancroft,I., Mewes,H.W., Rudd,S., Lemcke,K. and Mayer,K.F.X.
  JOURNAL   Unpublished
REFERENCE   3  (bases 1 to 110992)
  AUTHORS   EU Arabidopsis sequencing,project.
  TITLE     Direct Submission
  JOURNAL   Submitted (05-JUL-2000) MIPS, at the Max-Planck-Institut fuer
            Biochemie, Am Klopferspitz 18a, D-82152 Martinsried, FRG, E-mail:
            lemcke@mips.biochem.mpg.de,mayer@mips.biochem.mpg.de Project
            Coordinator: Mike Bevan, Molecular Genetics Department, Cambridge
            Laboratory, John Innes Centre, Colney Lane, NR4 7UJ Norwich, UK,
            E-mail: michael.bevan@bbsrc.ac.uk
COMMENT     Information on performance of analysis and a more detailed
            annotation of this entry and other sequences of chromosomes 3, 4
            and 5 can be viewed at: http://www.mips.biochem.mpg.de/proj/thal/.
FEATURES             Location/Qualifiers
     source          1. .110992
                     /organism="Arabidopsis thaliana"
                     /mol_type="genomic DNA"
                     /variety="Columbia"
                     /db_xref="taxon:3702"
                     /chromosome="5"
     gene            5081. .5751
                     /gene="F2I11_10"
     CDS             join(5081. .5302,5485. .5751)
                     /gene="F2I11_10"
                     /codon_start=1
                     /product="putative protein"
                     /protein_id="CAB96647.1"
                     /db_xref="GI:8953374"
                     /translation="MADLTCTTPFLLYPSLVIILFFYSINHHNQIFSSVVDDDPSCRL
                     SSSPQAVFSSFRIFPFRSSSSCLNITSNNNSTSEVVVVEEVDEAVERIEEGLAMARAA
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                     SL"
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exon            5081. .5302
                /gene="F2I11_10"
                /number=1
intron          5303. .5484
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                /number=1
exon            5485. .5751
                /gene="F2I11_10"
                /number=2
gene            6383. .7485
                /gene="F2I11_20"
CDS             join(6383. .6724,6817. .7485)
                /gene="F2I11_20"
                /note="similarity to various predicted proteins,
                Arabidopsis thaliana"
                /codon_start=1
                /product="putative protein"
                /protein_id="CAB96648.1"
                /db_xref="GI:8953375"
                /translation="MEKRFKIWTYREGEAPLFHKGPLNNIYAIEGQFMDEIENGNSRF
                KAASPEEATVFYIPVGIVNIIRFVYRPYTSYARDRLQNIVKDYISLISNRYPYWNRSR
                GADHFFLSCHDWAPDVSAVDPELYKHFIRALCNANSSEGFTPMRDVSLPEINIPHSQL
                GFVHTGEPPQNRKLLAFFAGGSHGDVRKILFQHWKEKDKDVLVYENLPKTMNYTKMMD
                KAKFCLCPSGWEVASPRIVESLYSGCVPVIIADYYVLPFSDVLNWKTFSVHIPISKMP
                DIKKILEAITEEEYLNMQRRVLEVRKHFVINRPSKPYDMLHMIMHSIWLRRLNVRIPL
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exon            6383. .6724
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                /number=1
intron          6725. .6816
                /gene="F2I11_20"
                /number=1
exon            6817. .7485
                /gene="F2I11_20"
                /number=2
gene            8104. .8829
                /gene="F2I11_30"
CDS             8104. .8829
                /gene="F2I11_30"
                /note="similarity to pEARLI 4, Arabidopsis thaliana,
                EMBL:ATPEARA"
                /codon_start=1
                /product="putative protein"
                /protein_id="CAB96649.1"
                /db_xref="GI:8953376"
                /translation="MSLCSEISQLHVPHWNSAYSVFNDDNDKDSVLLFPELLFSPLNK
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                EVVIELQSTPLRRLSESRATEILAIVDDIETAKIRVGWLRSVLEEVLEATRYFDRCEM
                AVMEKKAGEHRLLLAKQEMELSLKKLAEKEKEMKEFREKLMKTTGKLGSLEMKRTCLD
                KRLVFLRSKVEKFQGQSVFQDIL"
exon            8104. .8829
                /gene="F2I11_30"
                /number=1
gene            9386. .10605
                /gene="F2I11_40"
gene            complement(join(9386. .9476,9672. .9835,9993. .10183,
                10386. .10605))
                /gene="F2I11_40"
CDS             complement(join(9386. .9476,9672. .9835,9993. .10183,
                10386. .10605))
                /gene="F2I11_40"
                /note="similarity to synaptobrevin-like protein Sybl1, Mus
                musculus, EMBL:MMU133536"
                /codon_start=1
                /product="putative protein"
                /protein_id="CAB96650.1"
                /db_xref="GI:8953377"
                /translation="MAIIFALVARGTVVLSEFSATSTNASSISKQILEKLPGNDSDSH
                MSYSQDRYIFHVKRTDGLTVLCMADETAGRNIPFAFLDDIHQRFVKTYGRAIHSAQAY
                SMNDEFSRVLSQQMEFYSNDPNADRMSRIKGEMSQVRNVMIENIDKVLDRGERLELLV
                DKTENMQGNTFRFRKQARRYRTIMWWRNVKLTIALILVLALVVYIAMAFVCHGPSLPS
                CFK"
exon            complement(9386. .9476)
                /gene="F2I11_40"
                /number=1
intron          complement(9477. .9671)
                /gene="F2I11_40"
                /number=1
exon            complement(9672. .9835)
                /gene="F2I11_40"
                /number=2
intron          complement(9836. .9992)
                /gene="F2I11_40"
                /number=2
exon            complement(9993. .10183)
                /gene="F2I11_40"
                /number=3
intron          complement(10184. .10385)
                /gene="F2I11_40"
                /number=3
exon            complement(10386. .10605)
                /gene="F2I11_40"
                /number=4
gene            13535. .14747
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CDS             join(13535. .13625,13706. .13816,14045. .14137,14223. .14372,
                14464. .14522,14676. .14747)
                /gene="F2I11_50"
                /note="strong similarity to adenine
                phosphoribosyltransferase, Arabidopsis thaliana,
                EMBL:ATAPT2GEN"
                /codon_start=1
                /product="adenine phosphoribosyltransferase-like protein"
                /protein_id="CAB96651.1"
                /db_xref="GI:8953378"
                /translation="MFAAENGLKGDPRLEAISAAIRVVPNFPKKGIMFQDITTLLLDH
                KAFKHTIDIFVDRYKDMQISVVAGVEARGFLFGPSIALAIGAKFIPLRKPGKLPGKVI
                SESYELEYGHDRLEMHVGAVEPRERVIIIDDLVATGGTLSAAMSLLESQGAEVVECAC
                VIGLPEVKGQHKLKGKPLYVLVEPSGLDEFC"
exon            13535. .13625
                /gene="F2I11_50"
                /number=1
intron          13626. .13705
                /gene="F2I11_50"
                /number=1
exon            13706. .13816
                /gene="F2I11_50"
                /number=2
intron          13817. .14044
                /gene="F2I11_50"
                /number=2
exon            14045. .14137
                /gene="F2I11_50"
                /number=3
intron          14138. .14222
                /gene="F2I11_50"
                /number=3
exon            14223. .14372
                /gene="F2I11_50"
                /number=4
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                /number=4
exon            14464. .14522
                /gene="F2I11_50"
                /number=5
intron          14523. .14675
                /gene="F2I11_50"
                /number=5
exon            14676. .14747
                /gene="F2I11_50"
                /number=6
gene            16095. .19338
                /gene="F2I11_60"
CDS             join(16095. .16207,16440. .16540,16998. .17170,17270. .17501,
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                19062. .19145,19240. .19338)
                /gene="F2I11_60"
                /note="Published sequence extends beyond the 5' of this
                annotation. This cannot be reconciled by any gene models,

  Query Match             93.8%;  Score 15;  DB 8;  Length 110992;
  Best Local Similarity   100.0%;  Pred. No. 6e+02;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 CTCTGGAGCGTTCTC 16
              ||||||||||||||||
Db      68011 CTCTGGAGCGTTCTC 67997


RESULT 10
AC113911
LOCUS       AC113911              128789 bp    DNA     linear   HTG 19-NOV-2002
DEFINITION  Rattus norvegicus clone CH230-393O22, *** SEQUENCING IN PROGRESS
            ***.
ACCESSION   AC113911
VERSION     AC113911.5  GI:25072582
KEYWORDS    HTG; HTGS_PHASE2; HTGS_DRAFT; HTGS_ENRICHED.
SOURCE      Rattus norvegicus (Norway rat)
  ORGANISM  Rattus norvegicus
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
            Rattus.
REFERENCE   1  (bases 1 to 128789)
  AUTHORS   Muzny,D.Marie., Metzker,M.Lee., Abramzon,S., Adams,C., Alder,J.,
            Allen,C., Allen,H., Alsbrooks,S., Amin,A., Anguiano,D.,
            Anyalebechi,V., Aoyagi,A., Ayodeji,M., Baca,E., Baden,H.,
            Baldwin,D., Bandaranaike,D., Barber,M., Barnstead,M., Benahmed,F.,
            Biswalo,K., Blair,J., Blankenburg,K., Blyth,P., Brown,M.,
            Bryant,N., Buhay,C., Burch,P., Burrell,K., Calderon,E.,
            Cardenas,V., Carter,K., Cavazos,I., Ceasar,H., Center,A.,
            Chacko,J., Chavez,D., Chen,G., Chen,R., Chen,Y., Chen,Z., Chu,J.,
            Cleveland,C., Cockrell,R., Cox,C., Coyle,M., Cree,A., D'Souza,L.,
            Davila,M.L., Davis,C., Davy-Carroll,L., De Anda,C., Dederich,D.,
            Delgado,O., Denson,S., Deramo,C., Ding,Y., Dinh,H., Divya,K.,
            Draper,H., Dugan-Rocha,S., Dunn,A., Durbin,K., Duval,B., Eaves,K.,
            Egan,A., Escotto,M., Eugene,C., Evans,C.A., Falls,T., Fan,G.,
            Fernandez,S., Finley,M., Flagg,N., Forbes,L., Foster,M., Foster,P.,
            Fraser,C.M., Gabisi,A., Ganta,R., Garcia,A., Garner,T., Garza,M.,
            Gebregeorgis,E., Geer,K., Gill,R., Grady,M., Guerra,W., Guevara,W.,
            Gunaratne,P., Haaland,W., Hamil,C., Hamilton,C., Hamilton,K.,
            Harvey,Y., Havlak,P., Hawes,A., Henderson,N., Hernandez,J.,
            Hernandez,R., Hines,S., Hladun,S.L., Hodgson,A., Hogues,M.,
            Hollins,B., Howells,S., Hulyk,S., Hume,J., Idlebird,D., Jackson,A.,
            Jackson,L., Jacob,L., Jiang,H., Johnson,B., Johnson,R., Jolivet,A.,
            Karpathy,S., Kelly,S., Kelly,S., Khan,Z., King,L., Kovar,C.,
            Kowis,C., Kraft,C.L., Lebow,H., Levan,J., Lewis,L., Li,Z., Liu,J.,
            Liu,J., Liu,W., Liu,Y., London,P., Longacre,S., Lopez,J.,
            Lorensuhewa,L., Loulseged,H., Lozado,R.J., Lu,X., Ma,J.,
            Maheshwari,M., Mahindartne,M., Mahmoud,M., Malloy,K., Mangum,A.,
            Mangum,B., Mapua,P., Martin,K., Martin,R., Martinez,E.,
            Mawhiney,S., McLeod,M.P., McNeill,T.Z., Meenen,E.,
            Milosavljevic,A., Miner,G., Minja,E., Montemayor,J., Moore,S.,
            Morgan,M., Morris,K., Morris,S., Munidasa,M., Murphy,M., Nair,L.,
            Nankervis,C., Neal,D., Newton,N., Nguyen,N., Norris,S.,
            Nwaokelemeh,O., Okwuonu,G., Olarnpunsagoon,A., Pal,S., Parks,K.,
            Pasternak,S., Paul,H., Perez,A., Perez,L., Pfannkoch,C.,
            Plopper,F., Poindexter,A., Popovic,D., Primus,E., Pu,L.-L.,
            Puazo,M., Quiroz,J., Rachlin,E., Reeves,K., Regier,M.A., Reigh,R.,
            Reilly,B., Reilly,M., Ren,Y., Reuter,M., Richards,S., Riggs,F.,
            Rives,C., Rodkey,T., Rojas,A., Rose,M., Rose,R., Ruiz,S.J.,
            Sanders,W., Savery,G., Scherer,S., Scott,G., Shatsman,S., Shen,H.,
            Shetty,J., Shvartsbeyn,A., Sisson,I., Sitter,C.D., Smajs,D.,
            Sneed,A., Sodergren,E., Song,X.-Z., Sorelle,R., Sosa,J.,
            Steimle,M., Strong,R., Sutton,A., Svatek,A., Tabor,P., Taylor,C.,
            Taylor,T., Thomas,N., Thomas,S., Tingey,A., Trejos,Z., Usmani,K.,
            Valas,R., Vera,V., Villasana,D., Waldron,L., Walker,B., Wang,J.,
            Wang,Q., Wang,S., Warren,J., Warren,R., Wei,X., White,F.,
            Williams,G., Willson,R., Wleczyk,R., Wooden,H., Worley,K.,
            Wright,D., Wright,R., Wu,J., Yakub,S., Yen,J., Yoon,L., Yoon,V.,
            Yu,F., Zhang,J., Zhou,J., Zhou,X., Zhao,S., Dunn,D., von
            Niederhausern,A., Weiss,R., Smith,D.R., Holt,R.A., Smith,H.O.,
            Weinstock,G. and Gibbs,R.A.
  TITLE     Direct Submission
  JOURNAL   Unpublished
REFERENCE   2  (bases 1 to 128789)
  AUTHORS   Worley,K.C.
  TITLE     Direct Submission
  JOURNAL   Submitted (05-MAR-2002) Human Genome Sequencing Center, Department
            of Molecular and Human Genetics, Baylor College of Medicine, One
            Baylor Plaza, Houston, TX 77030, USA
REFERENCE   3  (bases 1 to 128789)
  AUTHORS   Rat Genome Sequencing Consortium.
  TITLE     Direct Submission
  JOURNAL   Submitted (19-NOV-2002) Human Genome Sequencing Center, Department
            of Molecular and Human Genetics, Baylor College of Medicine, One
            Baylor Plaza, Houston, TX 77030, USA
COMMENT     On Nov 19, 2002 this sequence version replaced gi:23815605.
            The sequence in this assembly is a combination of BAC based reads
            and whole genome shotgun sequencing reads assembled using Atlas
            (http://www.hgsc.bcm.tmc.edu/projects/rat/). Each contig described
            in the feature table below represents a scaffold in the Atlas
            assembly (a 'contig-scaffold'). Within each contig-scaffold,
            individual sequence contigs are ordered and oriented, and separated
            by sized gaps filled with Ns to the estimated size. The sequence
            may extend beyond the ends of the clone and there may be sequence
            contigs within a contig-scaffold that consist entirely of whole
            genome shotgun sequence reads. Both end sequences and whole genome
            shotgun sequence only contigs will be indicated in the feature
            table.
            -------------- Genome Center
                Center: Baylor College of Medicine
                Center code: BCM
                Web site: http://www.hgsc.bcm.tmc.edu/
                Contact: hgsc-help@bcm.tmc.edu
            -------------- Project Information
                Center project name: GTDK
                Center clone name: CH230-393O22
            -------------- Summary Statistics
                Assembly program: Phrap; version 0.990329
                Consensus quality: 124060 bases at least Q40
                Consensus quality: 125303 bases at least Q30
                Consensus quality: 126081 bases at least Q20
                Estimated insert size: 125161; sum-of-contigs estimation
                Quality coverage: 6x in Q20 bases; sum-of-contigs estimation
            --------------
            * NOTE: Estimated insert size may differ from sequence length
            *   (see http://www.hgsc.bcm.tmc.edu/docs/Genbank_draft_data.html).
            * NOTE: This is a 'working draft' sequence. It currently
            * consists of 1 contigs. Gaps between the contigs
            * are represented as runs of N. The order of the pieces
            * is believed to be correct as given, however the sizes
            * of the gaps between them are based on estimates that have
            * provided by the submittor.
            * This sequence will be replaced
            * by the finished sequence as soon as it is available and
            * the accession number will be preserved.
            *         1   128789: contig of 128789 bp in length.
FEATURES              Location/Qualifiers
     source           1. .128789
                      /organism="Rattus norvegicus"
                      /mol_type="genomic DNA"
                      /db_xref="taxon:10116"
                      /clone="CH230-393O22"
     misc_feature     1. .1287
                      /note="wgs_end_extension
                      clone_end:T7"
     misc_feature     1338. .3296
                      /note="wgs_end_extension
                      clone_end:T7"
     misc_feature     complement(5045. .5957)
                      /note="clone_boundary
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                     clone_end:T7
                     site:
                     end_sequence:BZ125599"
     misc_feature    87889. .89007
                     /note="wgs_contig"
     misc_feature    complement(124228. .125002)
                     /note="clone_boundary
                     clone_end:Sp6
                     site:
                     end_sequence:BZ125600"
     misc_feature    125406. .126558
                     /note="wgs_end_extension
                     clone_end:Sp6"
     misc_feature    127262. .128789
                     /note="wgs_end_extension
                     clone_end:Sp6"
BASE COUNT    36990 a  28779 c  26941 g  33935 t   2144 others
ORIGIN

  Query Match             93.8%;  Score 15;  DB 2;  Length 128789;
  Best Local Similarity   100.0%;  Pred. No. 6e+02;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 ACTCTGGAGCGTTCT 15
              |||||||||||||||
Db      14490 ACTCTGGAGCGTTCT 14504


RESULT 11
AP004750
LOCUS       AP004750               143779 bp    DNA     linear   HTG 21-MAR-2002
DEFINITION  Oryza sativa (japonica cultivar-group) chromosome 6 clone P0421H01,
            *** SEQUENCING IN PROGRESS ***.
ACCESSION   AP004750
VERSION     AP004750.1  GI:18656396
KEYWORDS    HTG; HTGS_PHASE2.
SOURCE      Oryza sativa (japonica cultivar-group)
  ORGANISM  Oryza sativa (japonica cultivar-group)
            Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
            Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
            Ehrhartoideae; Oryzeae; Oryza.
REFERENCE   1
  AUTHORS   Sasaki,T., Matsumoto,T. and Yamamoto,K.
  TITLE     Oryza sativa nipponbare(GA3) genomic DNA, chromosome 6, PAC
            clone:P0421H01
  JOURNAL   Published Only in Database (2002)
REFERENCE   2  (bases 1 to 143779)
  AUTHORS   Sasaki,T., Matsumoto,T. and Yamamoto,K.
  TITLE     Direct Submission
  JOURNAL   Submitted (13-FEB-2002) Takuji Sasaki, National Institute of
            Agrobiological Sciences, Rice Genome Research Program; Kannondai
            2-1-2, Tsukuba, Ibaraki 305-8602, Japan
            (E-mail:tsasaki@nias.affrc.go.jp, URL:http://rgp.dna.affrc.go.jp/,
            Tel:81-298-38-7441, Fax:81-298-38-7468)
COMMENT     NOTE: It currently consists of 1 contigs. Gaps between the contigs
            are represented as runs of N. The order of the pieces is believed
            to be correct as given, however the sizes of the gaps between them
            are based on estimates that have provided by the submitter. This
            sequence will be replaced by the finished sequence as soon as it is
            available and the accession number will be preserved.
            * NOTE: This is a 'working draft' sequence.
            * This sequence will be replaced
            * by the finished sequence as soon as it is available and
            * the accession number will be preserved.
FEATURES             Location/Qualifiers
     source          1. .143779
                     /organism="Oryza sativa (japonica cultivar-group)"
                     /mol_type="genomic DNA"
                     /cultivar="Nipponbare"
                     /db_xref="taxon:39947"
                     /chromosome="6"
                     /clone="P0421H01"
BASE COUNT    40258 a  30364 c  30984 g  42069 t    104 others
ORIGIN

  Query Match             93.8%;  Score 15;  DB 2;  Length 143779;
  Best Local Similarity   100.0%;  Pred. No. 6.1e+02;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 ACTCTGGAGCGTTCT 15
              |||||||||||||||
Db     120432 ACTCTGGAGCGTTCT 120446


RESULT 12
AC119218/c
LOCUS       AC119218               171351 bp    DNA     linear   HTG 24-FEB-2003
DEFINITION  Mus musculus clone RP24-200I20, WORKING DRAFT SEQUENCE, 3 unordered
            pieces.
ACCESSION   AC119218
VERSION     AC119218.3  GI:28475960
KEYWORDS    HTG; HTGS_PHASE1; HTGS_DRAFT.
SOURCE      Mus musculus (house mouse)
  ORGANISM  Mus musculus
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
REFERENCE   1  (bases 1 to 171351)
  AUTHORS   Birren,B., Nusbaum,C. and Lander,E.
  TITLE     Mus musculus, clone RP24-200I20
  JOURNAL   Unpublished
REFERENCE   2  (bases 1 to 171351)
  AUTHORS   Birren,B., Linton,L., Nusbaum,C., Lander,E., Ali,A., Allen,N.,
            Anderson,S., Barna,N., Bastien,V., Bloom,T., Boguslavkiy,L.,
            Boukhgalter,B., Brown,A., Camarata,J., Campopiano,A., Chang,J.,
            Chazaro,B., Choepel,Y., Colangelo,M., Collins,S., Collymore,A.,
            Cook,A., Cooke,P., DeArellano,K., Dewar,K., Diaz,J.S., Dodge,S.,
            Faro,S., Ferreira,P., FitzHugh,W., Gage,D., Galagan,J., Gardyna,S.,
            Ginde,S., Gord,S., Goyette,M., Graham,L., Grand-Pierre,N.,
            Hagos,B., Horton,L., Hulme,W., Iliev,I., Johnson,R., Jones,C.,
            Kamat,A., Karatas,A., Kells,C., LaRocque,K., Lamazares,R.,
            Landers,T., Lehoczky,J., Levine,R., Lindblad-Toh,K., Liu,G.,
            MacLean,C., Macdonald,P., Major,J., Marquis,N., Matthews,C.,
            McCarthy,M., McEwan,P., McKernan,K., Meldrim,J., Meneus,L.,
            Mihova,T., Mlenga,V., Murphy,T., Naylor,J., Nguyen,C., Nicol,R.,
            Norbu,C., Norman,C.H., O'Connor,T., O'Donnell,P., O'Neil,D.,
            Oliver,J., Peterson,K., Phunkhang,P., Pierre,N., Pollara,V.,
            Raymond,C., Retta,R., Rieback,M., Riley,R., Rise,C., Rogov,P.,
            Roman,J., Rosetti,M., Roy,A., Santos,R., Schauer,S., Schupback,R.,
            Seaman,S., Severy,P., Spencer,B., Stange-Thomann,N., Stojanovic,N.,
            Strauss,N., Subramanian,A., Talamas,J., Tesfaye,S., Theodore,J.,
            Topham,K., Travers,M., Travis,N., Trigilio,J., Vassiliev,H.,
            Viel,R., Vo,A., Wilson,B., Wu,X., Wyman,D., Ye,W.J., Young,G.,
            Zainoun,J., Zembek,L., Zimmer,A. and Zody,M.
  TITLE     Direct Submission
  JOURNAL   Submitted (25-APR-2002) Whitehead Institute/MIT Center for Genome
            Research, 320 Charles Street, Cambridge, MA 02141, USA
REFERENCE   3  (bases 1 to 171351)
  AUTHORS   Birren,B., Nusbaum,C., Lander,E., Abouelleil,A., Allen,N.,
            Anderson,S., Arachchi,H.M., Barna,N., Bastien,V., Bloom,T.,
            Boguslavkiy,L., Boukhgalter,B., Camarata,J., Chang,J., Choepel,Y.,
            Collymore,A., Cook,A., Cooke,P., Corum,B., DeArellano,K.,
            Diaz,J.S., Dodge,S., Dooley,K., Dorris,L., Erickson,J., Faro,S.,
            Ferreira,P., FitzGerald,M., Gage,D., Galagan,J., Gardyna,S.,
            Graham,L., Grand-Pierre,N., Hafez,N., Hagopian,D., Hagos,B.,
            Hall,J., Horton,L., Hulme,W., Iliev,I., Johnson,R., Jones,C.,
            Kamat,A., Karatas,A., Kells,C., Landers,T., Levine,R.,
            Lindblad-Toh,K., Liu,G., Lui,A., Mabbitt,R., MacLean,C.,
            Macdonald,P., Major,J., Manning,J., Matthews,C., McCarthy,M.,
            Meldrim,J., Meneus,L., Mihova,T., Mlenga,V., Murphy,T., Naylor,J.,
            Nguyen,C., Nicol,R., Norbu,C., O'Connor,T., O'Donnell,P.,
            O'Neil,D., Oliver,J., Peterson,K., Phunkhang,P., Pierre,N.,
            Rachupka,A., Ramasamy,U., Raymond,C., Retta,R., Rise,C., Rogov,P.,
            Roman,J., Schauer,S., Schupback,R., Seaman,S., Severy,P., Smith,C.,
            Spencer,B., Stange-Thomann,N., Stojanovic,N., Stubbs,M.,
            Talamas,J., Tesfaye,S., Theodore,J., Topham,K., Travers,M.,
            Vassiliev,H., Venkataraman,V.S., Viel,R., Vo,A., Wilson,B., Wu,X.,
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            Wyman,D., Young,G., Zainoun,J., Zembek,L., Zimmer,A. and Zody,M.
  TITLE     Direct Submission
  JOURNAL   Submitted (24-FEB-2003) Whitehead Institute/MIT Center for Genome
            Research, 320 Charles Street, Cambridge, MA 02141, USA
COMMENT     On Feb 24, 2003 this sequence version replaced gi:25989088.
            All repeats were identified using RepeatMasker:
            Smit, A.F.A. & Green, P. (1996-1997)
            http://ftp.genome.washington.edu/RM/RepeatMasker.html
            -------------- Genome Center
                Center: Whitehead Institute/ MIT Center for Genome Research
                Center code: WIBR
                Web site: http://www-seq.wi.mit.edu
                Contact: sequence_submissions@genome.wi.mit.edu
            -------------- Project Information
                Center project name: L25218
                Center clone name: 200_I_20
            -------------- Summary Statistics
                Sequencing vector: Plasmid; n/a; 100% of reads
                Chemistry: Dye-terminator Big Dye; 100% of reads
                Assembly program: Phrap; version 0.960731
                Consensus quality: 170946 bases at least Q40
                Consensus quality: 171051 bases at least Q30
                Consensus quality: 171082 bases at least Q20
                Insert size: 165000; agarose-fp
                Insert size: 171151; sum-of-contigs
                Quality coverage: 13.6 in Q20 bases; agarose-fp
                Quality coverage: 13.1 in Q20 bases; sum-of-contigs
            --------------.
            * NOTE: This is a 'working draft' sequence. It currently
            * consists of 3 contigs. The true order of the pieces
            * is not known and their order in this sequence record is
            * arbitrary. Gaps between the contigs are represented as
            * runs of N, but the exact sizes of the gaps are unknown.
            * This record will be updated with the finished sequence
            * as soon as it is available and the accession number will
            * be preserved.
            *        1     9415: contig of 9415 bp in length
            *     9416     9515: gap of 100 bp
            *     9516    47760: contig of 38245 bp in length
            *    47761    47860: gap of 100 bp
            *    47861   171351: contig of 123491 bp in length.
FEATURES             Location/Qualifiers
     source          1. .171351
                     /organism="Mus musculus"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:10090"
                     /clone="RP24-200I20"
                     /clone_lib="RPCI-24 Male Mouse BAC"
     misc_feature    1. .9415
                     /note="assembly_fragment
                     clone_end:SP6
                     vector_side:left"
     misc_feature    9516. .47760
                     /note="assembly_fragment"
     misc_feature    47861. .171351
                     /note="assembly_fragment
                     clone_end:T7
                     vector_side:right"
BASE COUNT    54672 a  31746 c  31997 g  52736 t    200 others
ORIGIN

  Query Match             93.8%;  Score 15;  DB 2;  Length 171351;
  Best Local Similarity   100.0%;  Pred. No. 6.1e+02;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 ACTCTGGAGCGTTCT 15
              |||||||||||||||
Db     113721 ACTCTGGAGCGTTCT 113707


RESULT 13
AC119639
LOCUS       AC119639              172305 bp    DNA     linear   HTG 20-NOV-2002
DEFINITION  Rattus norvegicus clone CH230-444M11, WORKING DRAFT SEQUENCE.
ACCESSION   AC119639
VERSION     AC119639.7  GI:25137775
KEYWORDS    HTG; HTGS_PHASE2; HTGS_DRAFT; HTGS_FULLTOP.
SOURCE      Rattus norvegicus (Norway rat)
  ORGANISM  Rattus norvegicus
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
            Rattus.
REFERENCE   1  (bases 1 to 172305)
  AUTHORS   Muzny,D.Marie., Metzker,M.Lee., Abramzon,S., Adams,C., Alder,J.,
            Allen,C., Allen,H., Alsbrooks,S., Amin,A., Anguiano,D.,
            Anyalebechi,V., Aoyagi,A., Ayodeji,M., Baca,E., Baden,H.,
            Baldwin,D., Bandaranaike,D., Barber,M., Barnstead,M., Benahmed,F.,
            Biswalo,K., Blair,J., Blankenburg,K., Blyth,P., Brown,M.,
            Bryant,N., Buhay,C., Burch,P., Burrell,K., Calderon,E.,
            Cardenas,V., Carter,K., Cavazos,I., Ceasar,H., Center,A.,
            Chacko,J., Chavez,D., Chen,G., Chen,R., Chen,Y., Chen,Z., Chu,J.,
            Cleveland,C., Cockrell,R., Cox,C., Coyle,M., Cree,A., D'Souza,L.,
            Davila,M.L., Davis,C., Davy-Carroll,L., De Anda,C., Dederich,D.,
            Delgado,O., Denson,S., Deramo,C., Ding,Y., Dinh,H., Divya,K.,
            Draper,H., Dugan-Rocha,S., Dunn,A., Durbin,K., Duval,B., Eaves,K.,
            Egan,A., Escotto,M., Eugene,C., Evans,C.A., Falls,T., Fan,G.,
            Fernandez,S., Finley,M., Flagg,N., Forbes,L., Foster,M., Foster,P.,
            Fraser,C.M., Gabisi,A., Ganta,R., Garcia,A., Garner,T., Garza,M.,
            Gebregeorgis,E., Geer,K., Gill,R., Grady,M., Guerra,W., Guevara,W.,
            Gunaratne,P., Haaland,W., Hamil,C., Hamilton,C., Hamilton,K.,
            Harvey,Y., Havlak,P., Hawes,A., Henderson,N., Hernandez,J.,
            Hernandez,R., Hines,S., Hladun,S.L., Hodgson,A., Hogues,M.,
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            Karpathy,S., Kelly,S., Kelly,S., Khan,Z., King,L., Kovar,C.,
            Kowis,C., Kraft,C.L., Lebow,H., Levan,J., Lewis,L., Li,Z., Liu,J.,
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            Milosavljevic,A., Miner,G., Minja,E., Montemayor,J., Moore,S.,
            Morgan,M., Morris,K., Morris,S., Munidasa,M., Murphy,M., Nair,L.,
            Nankervis,C., Neal,D., Newton,N., Nguyen,N., Norris,S.,
            Nwaokelemeh,O., Okwuonu,G., Olarnpunsagoon,A., Pal,S., Parks,K.,
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            Puazo,M., Quiroz,J., Rachlin,E., Reeves,K., Regier,M.A., Reigh,R.,
            Reilly,B., Reilly,M., Ren,Y., Reuter,M., Richards,S., Riggs,F.,
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            Sanders,W., Savery,G., Scherer,S., Scott,G., Shatsman,S., Shen,H.,
            Shetty,J., Shvartsbeyn,A., Sisson,I., Sitter,C.D., Smajs,D.,
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            Steimle,M., Strong,R., Sutton,A., Svatek,A., Tabor,P., Taylor,C.,
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            Valas,R., Vera,V., Villasana,D., Waldron,L., Walker,B., Wang,J.,
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            Williams,G., Willson,R., Wleczyk,R., Wooden,H., Worley,K.,
            Wright,D., Wright,R., Wu,J., Yakub,S., Yen,J., Yoon,L., Yoon,V.,
            Yu,F., Zhang,J., Zhou,J., Zhou,X., Zhao,S., Dunn,D., von
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            Weinstock,G. and Gibbs,R.A.
  TITLE     Direct Submission
  JOURNAL   Unpublished
REFERENCE   2  (bases 1 to 172305)
  AUTHORS   Worley,K.C.
  TITLE     Direct Submission
  JOURNAL   Submitted (30-APR-2002) Human Genome Sequencing Center, Department
            of Molecular and Human Genetics, Baylor College of Medicine, One
            Baylor Plaza, Houston, TX 77030, USA
REFERENCE   3  (bases 1 to 172305)
  AUTHORS   Rat Genome Sequencing Consortium.
  TITLE     Direct Submission
  JOURNAL   Submitted (20-NOV-2002) Human Genome Sequencing Center, Department
            of Molecular and Human Genetics, Baylor College of Medicine, One
            Baylor Plaza, Houston, TX 77030, USA
```

```
COMMENT     On Nov 20, 2002 this sequence version replaced gi:23908314.
            The sequence in this assembly is a combination of BAC based reads
            and whole genome shotgun sequencing reads assembled using Atlas
            (http://www.hgsc.bcm.tmc.edu/projects/rat/). Each contig described
            in the feature table below represents a scaffold in the Atlas
            assembly (a 'contig-scaffold'). Within each contig-scaffold,
            individual sequence contigs are ordered and oriented, and separated
            by sized gaps filled with Ns to the estimated size. The sequence
            may extend beyond the ends of the clone and there may be sequence
            contigs within a contig-scaffold that consist entirely of whole
            genome shotgun sequence reads. Both end sequences and whole genome
            shotgun sequence only contigs will be indicated in the feature
            table.
            -------------- Genome Center
                Center: Baylor College of Medicine
                Center code: BCM
                Web site: http://www.hgsc.bcm.tmc.edu/
                Contact: hgsc-help@bcm.tmc.edu
            -------------- Project Information
                Center project name: GVNE
                Center clone name: CH230-444M11
            -------------- Summary Statistics
                Assembly program: Phrap; version 0.990329
                Consensus quality: 165019 bases at least Q40
                Consensus quality: 166554 bases at least Q30
                Consensus quality: 167424 bases at least Q20
                Estimated insert size: 168444; sum-of-contigs estimation
                Quality coverage: 8x in Q20 bases; sum-of-contigs estimation
            --------------
            * NOTE: Estimated insert size may differ from sequence length
            *   (see http://www.hgsc.bcm.tmc.edu/docs/Genbank_draft_data.html).
            * NOTE: This is a 'working draft' sequence. It currently
            * consists of 1 contigs. Gaps between the contigs
            * are represented as runs of N. The order of the pieces
            * is believed to be correct as given, however the sizes
            * of the gaps between them are based on estimates that have
            * provided by the submittor.
            * This sequence will be replaced
            * by the finished sequence as soon as it is available and
            * the accession number will be preserved.
            *       1   172305: contig of 172305 bp in length.
FEATURES             Location/Qualifiers
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                     /mol_type="genomic DNA"
                     /db_xref="taxon:10116"
                     /clone="CH230-444M11"
     misc_feature    3003. .3826
                     /note="clone_boundary
                     clone_end:T7
                     site:
                     end_sequence:BZ179596"
     misc_feature    169300. .170736
                     /note="wgs_contig"
     misc_feature    171273. .172305
                     /note="wgs_contig"
BASE COUNT    48578 a  36286 c  35021 g  48537 t   3883 others
ORIGIN

  Query Match             93.8%;  Score 15;  DB 2;  Length 172305;
  Best Local Similarity   100.0%;  Pred. No. 6.1e+02;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 ACTCTGGAGCGTTCT 15
              |||||||||||||||
Db      91425 ACTCTGGAGCGTTCT 91439


RESULT 14
AC023124
LOCUS       AC023124              176146 bp    DNA     linear   HTG 20-OCT-2000
DEFINITION  Homo sapiens chromosome 2 clone RP11-310O5, WORKING DRAFT SEQUENCE,
            19 unordered pieces.
ACCESSION   AC023124
VERSION     AC023124.3  GI:10937932
KEYWORDS    HTG; HTGS_PHASE1; HTGS_DRAFT.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 176146)
  AUTHORS   Waterston,R.H.
  TITLE     The sequence of Homo sapiens clone
  JOURNAL   Unpublished
REFERENCE   2  (bases 1 to 176146)
  AUTHORS   Waterston,R.H.
  TITLE     Direct Submission
  JOURNAL   Submitted (08-FEB-2000) Genome Sequencing Center, Washington
            University School of Medicine, 4444 Forest Park Parkway, St. Louis,
            MO 63108, USA
COMMENT     On Oct 20, 2000 this sequence version replaced gi:7622513.

            ---------- Genome Center ----------
            Center: Washington University Genome Sequencing Center
            Center code: WUGSC
            Web site:http://genome.wustl.edu/gsc/index.shtml
            ---------- Project Information ----------
            Center project name: H_NH0310O05
            ---------- Summary Statistics ----------
            Sequencing vector: M13; 100%
            Sequencing vector: plasmid; 0%
            Chemistry: Dye-primer ET; 100% of reads
            Chemistry: Dye-terminator Big Dye; 0% of reads
            Assembly program: Phrap; version 0.990319
            Consensus quality: 164946 bases at least Q40
            Consensus quality: 168364 bases at least Q30
            Consensus quality: 170270 bases at least Q20
            Insert size: 173000; agarose-fp
            Insert size: 174346; sum-of-contigs
            Quality coverage: 4.09 in Q20 bases; agarose-fp
            Quality coverage: 4.12 in Q20 bases; sum-of-contigs
            ----------.
            * NOTE: This is a 'working draft' sequence. It currently
            * consists of 19 contigs. The true order of the pieces
            * is not known and their order in this sequence record is
            * arbitrary. Gaps between the contigs are represented as
            * runs of N, but the exact sizes of the gaps are unknown.
            * This record will be updated with the finished sequence
            * as soon as it is available and the accession number will
            * be preserved.
            *       1     7408: contig of 7408 bp in length
            *    7409     7508: gap of unknown length
            *    7509    13178: contig of 5670 bp in length
            *   13179    13278: gap of unknown length
            *   13279    21297: contig of 8019 bp in length
            *   21298    21397: gap of unknown length
            *   21398    29724: contig of 8327 bp in length
            *   29725    29824: gap of unknown length
            *   29825    40504: contig of 10680 bp in length
            *   40505    40604: gap of unknown length
            *   40605    50599: contig of 9995 bp in length
            *   50600    50699: gap of unknown length
            *   50700    65357: contig of 14658 bp in length
            *   65358    65457: gap of unknown length
            *   65458    80379: contig of 14922 bp in length
            *   80380    80479: gap of unknown length
            *   80480    94096: contig of 13617 bp in length
            *   94097    94196: gap of unknown length
            *   94197   114145: contig of 19949 bp in length
            *  114146   114245: gap of unknown length
            *  114246   116560: contig of 2315 bp in length
            *  116561   116660: gap of unknown length
            *  116661   146476: contig of 29816 bp in length
            *  146477   146576: gap of unknown length
            *  146577   149812: contig of 3236 bp in length
            *  149813   149912: gap of unknown length
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            *   149913   152443: contig of 2531 bp in length
            *   152444   152543: gap of unknown length
            *   152544   155619: contig of 3076 bp in length
            *   155620   155719: gap of unknown length
            *   155720   158829: contig of 3110 bp in length
            *   158830   158929: gap of unknown length
            *   158930   163200: contig of 4271 bp in length
            *   163201   163300: gap of unknown length
            *   163301   170802: contig of 7502 bp in length
            *   170803   170902: gap of unknown length
            *   170903   176146: contig of 5244 bp in length.
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     misc_feature    7509. .13178
                     /note="assembly_name:Contig11"
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                     /note="assembly_name:Contig12"
     misc_feature    21398. .29724
                     /note="assembly_name:Contig13"
     misc_feature    29825. .40504
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     misc_feature    80480. .94096
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                     /note="assembly_name:Contig8"
     misc_feature    170903. .176146
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BASE COUNT    52533 a  33873 c  34650 g  53284 t   1806 others
ORIGIN

  Query Match             93.8%;  Score 15;  DB 2;  Length 176146;
  Best Local Similarity   100.0%;  Pred. No. 6.1e+02;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 CTCTGGAGCGTTCTC 16
              ||||||||||||||||
Db      72405 CTCTGGAGCGTTCTC 72419


RESULT 15
ATCHRIV77
LOCUS       ATCHRIV77              197252 bp    DNA     linear   PLN 16-MAR-2000
DEFINITION  Arabidopsis thaliana DNA chromosome 4, contig fragment No. 77.
ACCESSION   AL161581
VERSION     AL161581.2  GI:7270134
KEYWORDS    .
SOURCE      Arabidopsis thaliana (thale cress)
  ORGANISM  Arabidopsis thaliana
            Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
            Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
            rosids; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
REFERENCE   1  (bases 1 to 39664)
  AUTHORS   Weichselgartner,M., Fartmann,B., Granderath,K., Dauner,D.,
            Herzl,A., Neumann,S., Mewes,H.W., Lemcke,K. and Mayer,K.F.X.
  JOURNAL   Unpublished
REFERENCE   2  (bases 13718 to 106974)
  AUTHORS   Terryn,N., Ardiles,W., Buysshaert,C., Dasseville,R., De Clerck,R.,
            De Keyser,A., Neyt,P., Rouze,P., Van Den Daele,H., Villaroel,R.,
            Gielen,J., Van Montagu,M., Mewes,H.W., Lemcke,K. and Mayer,K.F.X.
  JOURNAL   Unpublished
REFERENCE   3  (bases 98170 to 134439)
  AUTHORS   Pohl,T., Weizenegger,T., Mewes,H.W., Lemcke,K. and Mayer,K.F.X.
  JOURNAL   Unpublished
REFERENCE   4  (bases 129356 to 197252)
  AUTHORS   Benes,V., Rechmann,S., Borkova,D., Ansorge,W., Mewes,H.W.,
            Lemcke,K. and Mayer,K.F.X.
  JOURNAL   Unpublished
REFERENCE   5  (bases 1 to 197252)
  AUTHORS   EU Arabidopsis sequencing,project.
  TITLE     Direct Submission
  JOURNAL   Submitted (10-MAR-2000) MIPS, at the Max-Planck-Institut fuer
            Biochemie, Am Klopferspitz 18a, D-82152 Martinsried, FRG, E-mail:
            lemcke@mips.biochem.mpg.de,mayer@mips.biochem.mpg.de Project
            Coordinator: Mike Bevan, Molecular Genetics Department, Cambridge
            Laboratory, John Innes Centre, Colney Lane, NR4 7UJ Norwich, UK,
            E-mail: michael.bevan@bbsrc.ac.uk
COMMENT     Information on performance of analysis and a more detailed
            annotation of this entry and other sequences of chromosomes 3, 4
            and 5 can be viewed at: http://www.mips.biochem.mpg.de/proj/thal/
            this fragment has an overlap with ATCHRIV76 at the 5' end and an
            overlap with ATCHRIV78 at the 3' end.
FEATURES             Location/Qualifiers
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                     /mol_type="genomic DNA"
                     /variety="Columbia"
                     /db_xref="taxon:3702"
                     /chromosome="4"
     misc_feature    13716. .39664
                     /note="overlap to BAC F8B4; please refer to EMBL:AL034567
                     for analysis and annotation"
     gene            13977. .16442
                     /gene="AT4g32300"
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                     /gene="AT4g32300"
                     /note="strong similarity to serine/threonine-specific
                     protein kinase PK10 precursor, Oryza sativa, PIR2:S50767
                     Contains Protein kinases signatures and profile
                     AA456-478;Protein kinases signatures and profile AA571-583
                     contains EST gb:AI995352.1, R90564, T44889, T45358"
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                     /db_xref="GI:7270135"
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                     KEGMKLTSSPSSSNMTYALEIKSGDMVLSVNSLTPQVYWSMANARERIINKDGGVVTS
                     SSLLGNSWRFFDQKQVLLWQFVFSDNKDDNTTWIAVLGNNGVISFSNLGSGASAADSS
                     TKIPSDLCGTPEPCGPYYVCSGSKVCGCVSGLSRARSDCKTGITSPCKKTKDNATLPL
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                     VVTVFIIAVLIFVAFRIHKRKKMILEAPQESSEEDNFLENLSGMPIRFAYKDLQSATN
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                     RGFCAEGAHRLLAYEFLSKGSLERWIFRKKDGDVLLDWDTRFNIALGTAKGLAYLHED
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exon 19140. .19242
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gene 23201. .25876
/gene="AT4g32330"

CDS join(23201. .23258,23799. .24010,24095. .24400,24453. .24493,
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/protein_id="CAB79950.1"
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HETSEDDTQSSNPKADDGKPRKVGALPNYGFSFKCDQRAEKRKEFYVKLEEKTHAKEE
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exon 24677. .24748
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/gene="AT4g32330"
/number=5

exon 24869. .24965
/gene="AT4g32330"
/number=6

intron 24966. .25047
/gene="AT4g32330"
/number=6

exon 25048. .25119
/gene="AT4g32330"
/number=7

intron 25120. .25161
/gene="AT4g32330"
/number=7

exon 25162. .25314
/gene="AT4g32330"
/number=8

intron 25315. .25615
/gene="AT4g32330"
/number=8

exon 25616. .25876
/gene="AT4g32330"
/number=9

Query Match 93.8%; Score 15; DB 8; Length 197252;
Best Local Similarity 100.0%; Pred. No. 6.2e+02;
Matches 15; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 2 CTCTGGAGCGTTCTC 16
||||||||||||||||
Db 176431 CTCTGGAGCGTTCTC 176445

Search completed: January 20, 2004, 17:15:05
Job time : 572.176 secs

GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: January 20, 2004, 16:34:44 ; Search time 99.7647 Seconds
(without alignments)
432.929 Million cell updates/sec

Title: US-10-068-160-73
Perfect score: 16
Sequence: 1 actctggagcgttctc 16

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 2552756 seqs, 1349719017 residues

Total number of hits satisfying chosen parameters: 5105512

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

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25: /SIDS1/gcgdata/geneseq/geneseqn-embl/NA2003.DAT:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.		Score	% Query Match	Length	DB	ID	Description
c	1	15	93.8	1125	22	AAH68311	C glutamicum codin
c	2	15	93.8	1230	24	ABK85615	DNA encoding murin
	3	15	93.8	309400	22	AAH68534	C glutamicum codin
	4	14.4	90.0	16	22	AAS09557	Immunoreactive CpG
	5	14.4	90.0	16	22	AAC80587	Immunogenic CpG ol
	6	14.4	90.0	16	24	ABK46435	Immunostimulatory
	7	14.4	90.0	16	24	ABL35629	Immunostimulatory
	8	14.4	90.0	16	24	ABL35643	Immunostimulatory
	9	14.4	90.0	16	24	ABL35670	Immunostimulatory
	10	14.4	90.0	17	22	AAS09564	Immunoreactive CpG
	11	14.4	90.0	17	22	AAC80594	Immunogenic CpG ol
	12	14.4	90.0	17	24	ABK46442	Immunostimulatory
	13	14.4	90.0	18	22	AAS09561	Immunoreactive CpG
	14	14.4	90.0	18	22	AAF99525	Immunostimulatory
	15	14.4	90.0	18	22	AAC80591	Immunogenic CpG ol
	16	14.4	90.0	18	24	ABS78240	Angiogenesis inhib
	17	14.4	90.0	18	24	ABK46439	Immunostimulatory
	18	14.4	90.0	18	24	ABL38807	Immunostimulatory
	19	14.4	90.0	19	22	AAS09555	Immunoreactive CpG
	20	14.4	90.0	19	22	AAC80585	Immunogenic CpG ol
	21	14.4	90.0	19	24	ABK46433	Immunostimulatory
	22	14.4	90.0	19	24	ABL35628	Immunostimulatory
	23	14.4	90.0	19	24	ABL35642	Immunostimulatory
	24	14.4	90.0	19	24	ABL35669	Immunostimulatory
	25	14.4	90.0	20	19	AAV27683	Immunostimulatory
	26	14.4	90.0	20	19	AAV27685	Immunostimulatory
	27	14.4	90.0	20	20	AAZ41862	IL-12 secretion in
	28	14.4	90.0	20	20	AAZ41863	IL-12 secretion in
	29	14.4	90.0	20	20	AAZ41864	IL-12 secretion in
	30	14.4	90.0	20	20	AAZ41865	IL-12 secretion in
	31	14.4	90.0	20	20	AAZ41883	IL-12 secretion in
	32	14.4	90.0	20	20	AAZ41886	IL-12 secretion in
	33	14.4	90.0	20	20	AAV72501	CpG motif containi
	34	14.4	90.0	20	21	AAA90455	CpG adjuvant oligo
	35	14.4	90.0	20	21	AAZ60939	Nucleotide sequenc
	36	14.4	90.0	20	21	AAZ60940	Nucleotide sequenc
	37	14.4	90.0	20	21	AAZ60941	Nucleotide sequenc
	38	14.4	90.0	20	21	AAZ60955	Nucleotide sequenc
	39	14.4	90.0	20	21	AAZ60957	Nucleotide sequenc
	40	14.4	90.0	20	21	AAZ60958	Nucleotide sequenc
	41	14.4	90.0	20	21	AAZ48841	B-cell stimulating
	42	14.4	90.0	20	21	AAZ48843	B-cell stimulating
	43	14.4	90.0	20	21	AAZ47608	Parasitic infectio
	44	14.4	90.0	20	21	AAZ47609	Parasitic infectio
	45	14.4	90.0	20	21	AAZ47610	Parasitic infectio

ALIGNMENTS

RESULT 1
AAH68311/c
ID AAH68311 standard; DNA; 1125 BP.
XX
AC AAH68311;
XX
DT 26-SEP-2001 (first entry)
XX
DE C glutamicum coding sequence fragment SEQ ID NO: 3346.
XX
KW Coryneform bacterium; amino acid synthesis; vitamin; saccharide;
KW organic acid synthesis; ds.
XX
OS Corynebacterium glutamicum.
XX
PN EP1108790-A2.
XX
PD 20-JUN-2001.
XX
PF 18-DEC-2000; 2000EP-0127688.
XX
PR 16-DEC-1999; 99JP-0377484.
PR 07-APR-2000; 2000JP-0159162.
PR 03-AUG-2000; 2000JP-0280988.
XX
PA (KYOW) KYOWA HAKKO KOGYO KK.
XX
PI Nakagawa S, Mizoguchi H, Ando S, Hayashi M, Ochiai K, Yokoi H;
PI Tateishi N, Senoh A, Ikeda M, Ozaki A;
XX
DR WPI; 2001-376931/40.

```
DR   P-PSDB; AAG93092.
XX
PT   Novel polynucleotides derived from Coryneform bacteria, for identifying
PT   mutation point of a gene, measuring expression of a gene, analysing
PT   expression profile or pattern of a gene and identifying homologous gene
PT   -
XX
PS   Claim 8; SEQ ID NO: 3346; 246pp + Sequence Listing; English.
XX
CC   The present invention provides a number of nucleotide and protein
CC   sequences from the Coryneform bacterium Corynebacterium glutamicum. These
CC   are useful for identifying the mutation point of a gene derived from a
CC   mutant of coryneform bacterium, measuring expression amount and
CC   analysing the expression profile or expression pattern of a gene derived
CC   from Coryneform bacterium, and identifying a homologue of a gene derived
CC   from coryneform bacterium. Coryneform bacteria are useful for producing
CC   amino acids, nucleic acids, vitamins, saccharides and organic acids,
CC   particularly L-lysine. The present sequence is a nucleic acid described
CC   in the exemplification of the invention.
CC   Note: The sequence data for this patent did not form part of the printed
CC   specification, but was obtained in electronic format directly from the
CC   European Patent Office.
XX
SQ   Sequence 1125 BP; 273 A; 355 C; 283 G; 214 T; 0 other;

  Query Match             93.8%;  Score 15;  DB 22;  Length 1125;
  Best Local Similarity   100.0%;  Pred. No. 1.2e+02;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 CTCTGGAGCGTTCTC 16
              ||||||||||||||||
Db        372 CTCTGGAGCGTTCTC 358


RESULT 2
ABK85615/c
ID   ABK85615 standard; DNA; 1230 BP.
XX
AC   ABK85615;
XX
DT   16-AUG-2002  (first entry)
XX
DE   DNA encoding murine NET protein.
XX
KW   NET; mouse; gene; ds; ERP; SAP-1; angiogenesis; transgenic; ulcer;
KW   ischaemia; wound healing; vascular restenosis; hypertension; dementia;
KW   alzheimer's disease; lymphoedema; atherosclerosis; haemangioma; bone;
KW   haemangioendothelioma; ovarian hyperstimulation; endometriosis; ascites;
KW   follicular cyst; Kaposi sarcoma; tumour; cancer; allergy; synovitis;
KW   respiratory distress; rheumatoid arthritis; pneumonia; thyroiditis;
KW   cartilage dysfunction; obesity; asthma; inflammation; hepatitis;
KW   glomerulonephritis; diabetic retinopathy; thyroiditis; nasal polyp;
KW   chromosome 10C-D1.
XX
OS   Mus sp.
XX
FH   Key             Location/Qualifiers
FT   CDS             1..1230
FT                   /*tag=  a
FT                   /product= "Mouse NET protein"
XX
PN   EP1202065-A1.
XX
PD   02-MAY-2002.
XX
PF   25-OCT-2000; 2000EP-0402968.
XX
PR   25-OCT-2000; 2000EP-0402968.
XX
PA   (AVET ) AVENTIS PHARMA SA.
PA   (INRM ) INSERM INST NAT SANTE & RECH MEDICALE.
XX
PI   Wasylyk B,  Multon M,  Ayadi A,  Zheng H;
XX
DR   WPI; 2002-437317/47.
DR   P-PSDB; AAU97931.
XX
PT   Use of all or part of a NET polypeptide to identify compounds useful to
PT   modulate angiogenesis and prevent or treat pathologies associated with
PT   angiogenic disorders e.g. cardiac ischaemia, atherosclerosis or tumour
PT   growth -
XX
PS   Disclosure; Page 36-39; 77pp; English.
XX
CC   This invention relates to the use of all or part of a NET (also known as
CC   ERP or SAP-1) polypeptide to identify compounds modulating angiogenesis
CC   or compounds that can be used to prevent or treat pathologies associated
CC   with angiogenic disorders. The invention also comprises transgenic
CC   animals that bear mutations in the NET gene. The method and transgenic
CC   animals of the invention are useful to identify compounds to treat
CC   pathologies associated with angiogenic disorders involving insufficient
CC   vascularisation and requiring increased angiogenesis (e.g. cardiac/
CC   peripheral ischaemia, defects in wound healing and vascular restenosis,
CC   hypertension, ulcers, alzheimer's disease, lymphooedema, dementia)
CC   or involving increased vascularisation and requiring decreased
CC   angiogenesis (e.g. atherosclerosis, haemangioma, haemangioendothelioma,
CC   ovarian hyperstimulation, endometriosis, ascites, follicular cysts, ).
CC   They are also useful to identify compounds useful to treat pathologies
CC   associated with angiogenic disorders such as Kaposi sarcoma, tumour
CC   growth and cancer, or other pathologies in which NET is activated).
CC   Such compounds may also be used to treat allergies, dysfunctional
CC   uterine bleeding, respiratory distress, rheumatoid arthritis, bone and
CC   cartilage dysfunction, obesity, synovitis, inflammation, hepatitis,
CC   glomerulonephritis, asthma, retinopathy, thyroiditis, pneumonia,
CC   nasal polyps and thyroiditis. Such compounds may be e.g. antisense
CC   polynucleotides downregulating or blocking expression of a NET gene,
CC   intracellular binding proteins or NET dominant negative mutants.
CC   Compounds modulating NET activity may also be included in medicaments to
CC   prevent and/or treat pathologies associated with angiogenic disorders.
CC   The present sequence represents the DNA encoding the mouse NET
CC   protein used in the method of the invention, the gene encoding this
CC   protein is located on murine chromosome 10C-D1.
XX
SQ   Sequence 1230 BP; 278 A; 415 C; 285 G; 252 T; 0 other;

  Query Match             93.8%;  Score 15;  DB 24;  Length 1230;
  Best Local Similarity   100.0%;  Pred. No. 1.2e+02;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 CTCTGGAGCGTTCTC 16
              ||||||||||||||||
Db        468 CTCTGGAGCGTTCTC 454


RESULT 3
AAH68534
ID   AAH68534 standard; DNA; 309400 BP.
XX
AC   AAH68534;
XX
DT   26-SEP-2001  (first entry)
XX
DE   C glutamicum coding sequence fragment SEQ ID NO: 7069.
XX
KW   Coryneform bacterium; amino acid synthesis; vitamin; saccharide;
KW   organic acid synthesis; ds.
XX
OS   Corynebacterium glutamicum.
XX
PN   EP1108790-A2.
XX
PD   20-JUN-2001.
XX
PF   18-DEC-2000; 2000EP-0127688.
XX
PR   16-DEC-1999;   99JP-0377484.
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PR 07-APR-2000; 2000JP-0159162.
PR 03-AUG-2000; 2000JP-0280988.
XX
PA (KYOW) KYOWA HAKKO KOGYO KK.
XX
PI Nakagawa S, Mizoguchi H, Ando S, Hayashi M, Ochiai K, Yokoi H;
PI Tateishi N, Senoh A, Ikeda M, Ozaki A;
XX
DR WPI; 2001-376931/40.
XX
PT Novel polynucleotides derived from Coryneform bacteria, for identifying
PT mutation point of a gene, measuring expression of a gene, analysing
PT expression profile or pattern of a gene and identifying homologous gene
PT -
XX
PS Disclosure; SEQ ID NO: 7069; 246pp + Sequence Listing; English.
XX
CC The present invention provides a number of nucleotide and protein
CC sequences from the Coryneform bacterium Corynebacterium glutamicum. These
CC are useful for identifying the mutation point of a gene derived from a
CC mutant of coryneform bacterium, measuring expression amount and
CC analysing the expression profile or expression pattern of a gene derived
CC from Coryneform bacterium, and identifying a homologue of a gene derived
CC from coryneform bacterium. Coryneform bacteria are useful for producing
CC amino acids, nucleic acids, vitamins, saccharides and organic acids,
CC particularly L-lysine. The present sequence is a nucleic acid described
CC in the exemplification of the invention.
CC Note: The sequence data for this patent did not form part of the printed
CC specification, but was obtained in electronic format directly from the
CC European Patent Office.
XX
SQ Sequence 309400 BP; 70133 A; 86477 C; 83115 G; 69675 T; 0 other;

Query Match 93.8%; Score 15; DB 22; Length 309400;
Best Local Similarity 100.0%; Pred. No. 1.7e+02;
Matches 15; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 2 CTCTGGAGCGTTCTC 16
||||||||||||||||
Db 226316 CTCTGGAGCGTTCTC 226330

RESULT 4
AAS09557
ID AAS09557 standard; DNA; 16 BP.
XX
AC AAS09557;
XX
DT 26-SEP-2001 (first entry)
XX
DE Immunoreactive CpG sequence-containing oligonucleotide #7.
XX
KW CpG sequence; immune response; non-B cell activation; interferon gamma;
KW IFN-gamma; humoral; antibody production; interleukin-6 production;
KW therapeutic; allergy; asthma; cancer; autoimmune disorder; infection;
KW bio-warfare; vaccine; antisense therapy; eczema; allergic rhinitis;
KW coryza; hay fever; urticaria; hives; food allergy; atopic condition;
KW hepatitis; human immunodeficiency virus; HIV; malaria; Francisella;
KW lupus erythematosus; rheumatoid arthritis; multiple sclerosis;
KW schistosomiasis; tuberculosis; acquired immunodeficiency syndrome; AIDS;
KW Leishmania; Ebola; Anthrax; Listeria; ss.
XX
OS Synthetic.
XX
PN WO200151500-A1.
XX
PD 19-JUL-2001.
XX
PF 12-JAN-2001; 2001WO-US01122.
XX
PR 14-JAN-2000; 2000US-0176115.
XX
PA (USSH) US DEPT HEALTH & HUMAN SERVICES.
XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-442129/47.
XX
PT Oligodeoxynucleotides for inducing an immune response to treat and
PT prevent an allergic reaction, cancer, an autoimmune disorder and
PT symptoms resulting from exposure to bio-warfare agents, comprise
PT multiple CpG sequences -
XX
PS Claim 5; Page 28; 48pp; English.
XX
CC AAS09551-AAS09662 represent oligodeoxynucleotides (ODN) of at least 10
CC nucleotides comprising multiple CpG sequences, where one of the CpG
CC sequences is different from another of the multiple CpG sequences.
CC The ODN are useful for inducing an immune response, preferably a cell-
CC mediated immune response, involving non-B cell activation, interferon
CC gamma (IFN-gamma) production or a humoral immune response involving B
CC cell activation, antibody and interleukin-6 production in a host, for
CC treating, preventing or ameliorating an allergic reaction, e.g. asthma,
CC cancer, e.g. solid tumour cancer, a disease associated with the immune
CC system e.g. autoimmune disorder or an immune system deficiency, infection
CC or a symptom resulting from exposure to bio-warfare agent in a human. The
CC induction of immune response improves the efficacy of a vaccine and is
CC used in antisense therapy. The ODN are useful for treating, preventing or
CC ameliorating allergic reactions, including eczema, allergic rhinitis or
CC coryza, hay fever, bronchial asthma, urticaria (hives), food allergies
CC and other atopic conditions, for improving the efficacy of vaccines
CC against hepatitis A, B and C, human immunodeficiency virus (HIV) and
CC malaria, for treating immune system deficiencies, e.g. lupus
CC erythematosus and autoimmune diseases such as rheumatoid arthritis and
CC multiple sclerosis, infections including Francisella, schistosomiasis,
CC tuberculosis, acquired immunodeficiency syndrome (AIDS), Leishmania and
CC symptoms resulting from exposure of bio-warfare agent, including Ebola,
CC Anthrax and Listeria.
XX
SQ Sequence 16 BP; 2 A; 6 C; 3 G; 5 T; 0 other;

Query Match 90.0%; Score 14.4; DB 22; Length 16;
Best Local Similarity 93.8%; Pred. No. 1.8e+02;
Matches 15; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 ACTCTGGAGCGTTCTC 16
||||| ||||||||||
Db 1 ACTCTCGAGCGTTCTC 16

RESULT 5
AAC80587
ID AAC80587 standard; DNA; 16 BP.
XX
AC AAC80587;
XX
DT 14-FEB-2001 (first entry)
XX
DE Immunogenic CpG oligodeoxynucleotide, SEQ ID NO:7.
XX
KW CpG oligodeoxynucleotide; unmethylated; antigen-presenting cell;
KW immunogenic; cytokine release; natural killer cell; NK cell activation;
KW cell-mediated immune response; T-cell response; humoral response;
KW B-cell response; antibody production; immune response induction;
KW vaccine; allergy; asthma; infection; bacterial; viral; fungal; protozoal;
KW parasitic; tuberculosis; AIDS; autoimmune disease; lupus erythematosus;
KW rheumatoid arthritis; multiple sclerosis; solid tumour; cancer;
KW immune deficiency; biological warfare agent; cytostatic; antiarthritic;
KW antimicrobial; antiallergic; protozoacide; tuberculostatic;
KW antiasthmatic; dermatological; phosphorothioate; ss.
XX
OS Synthetic.
XX
PN WO200061151-A2.
XX
PD 19-OCT-2000.

XX
PF 12-APR-2000; 2000WO-US09839.
XX
PR 12-APR-1999; 99US-0128898.
XX
PA (KLIN/) KLINMAN D.
PA (ISHI/) ISHII K.
PA (VERT/) VERTHELYI D.
XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-006880/01.
XX
PT Novel oligonucleotides useful for the prevention and treatment of
PT allergies, cancer, and autoimmune disorders and for ameliorating
PT symptoms resulting from exposure to a bio-warfare agent -
XX
PS Claim 4; Page 25; 46pp; English.
XX
CC The invention relates to novel immunogenic CpG oligodeoxynucleotides
CC (AAC80581-C80723). The oligonucleotide are at least 10 bases long
CC and comprise one of the generic sequences 5'-NNNT-CpG-WNNN-3' or
CC 5'-RY-CpG-RY-3'. The central CpG motif is unmethylated, and the
CC oligonucleotides optionally have phosphorothioate linkages which make
CC them more resistant to degradation. The invention also relates to an
CC oligonucleotide delivery complex comprising an oligonucleotide of the
CC invention and a targetting agent, and a pharmaceutical composition
CC comprising the oligonucleotide delivery complex. The oligonucleotides
CC are able to induce either a cell-mediated (T-cell) response or a humoral
CC (B-cell, antibody) response, with oligonucleotides of the sequence
CC 5'-RY-CpG-RY-3' being able to induce a cell-mediated response, and those
CC of the sequence 5'-NNNT-CpG-WNNN-3' being able to induce a humoral
CC response. It is thought that after administration, the oligonucleotide
CC acts on antigen-presenting cells (e.g., macrophages and dendritic
CC cells), which then release cytokines, leading to activation of natural
CC killer (NK) cells. A cell-mediated or humoral response can then occur by
CC activation of T- or B-cells. The induction of an immune response is
CC useful for treating, preventing or ameliorating an allergic reaction
CC (preferably asthma), or an infection, where an immunogenic CpG
CC oligonucleotide is administered either alone or in combination with an
CC anti-allergenic agent or anti-infectious agent. The allergic conditions
CC which may be treated include eczema, allergic rhinitis, hayfever,
CC urticaria, food allergies and other atopic conditions, and the
CC infections which may be treated include viral, bacterial, fungal and
CC protozoal infections such as tuberculosis, AIDS, leishmania and
CC schistosomiasis. Immune response induction may also be used in the
CC treatment of an autoimmune disorder (e.g., lupus erythematosus,
CC rheumatoid arthritis and multiple sclerosis), a disease associated with
CC immune system deficiency, and symptoms resulting from exposure to an
CC agent of biological warfare. An immunogenic CpG oligonucleotide, either
CC alone or in combination with an anti-cancer agent, is useful for treating
CC solid tumour cancer. The induction of an immune response is used in
CC antisense therapy and to improve the efficacy of a vaccine. The
CC oligonucleotide is preferably administered to lymphocytes ex vivo,
CC producing activated lymphocytes which are then administered to the host.
CC The present sequence represents an immunogenic CpG oligodeoxynucleotide
CC of the invention.
XX
SQ Sequence 16 BP; 2 A; 6 C; 3 G; 5 T; 0 other;

Query Match 90.0%; Score 14.4; DB 22; Length 16;
Best Local Similarity 93.8%; Pred. No. 1.8e+02;
Matches 15; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 ACTCTGGAGCGTTCTC 16
|||||.||||||||||
Db 1 ACTCTCGAGCGTTCTC 16

RESULT 6
ABK46435
ID ABK46435 standard; DNA; 16 BP.
XX
AC ABK46435;
XX
DT 05-JUN-2002 (first entry)
XX
DE Immunostimulatory unmethylated CpG oligodideoxynucleotide #25.
XX
KW unmethylated CpG; oligdideoxynucleotide; ODN; virucide; vaccine;
KW Paramyxoviridae; F protein; respiratory syncytial virus; RSV;
KW viral bronchiolitis; pneumonia; infectious pulmonary disease;
KW bronchopulmonary dysplasia; congenital heart condition; ss.
XX
OS Synthetic.
XX
PN WO200211761-A2.
XX
PD 14-FEB-2002.
XX
PF 09-AUG-2001; 2001WO-US41633.
XX
PR 10-AUG-2000; 2000US-224011P.
PR 01-SEP-2000; 2000US-229307P.
XX
PA (JACK-) JACKSON FOUND ADVANCEMENT MILITARY MED.
XX
PI Mond JJ, Prince G, Klinman DM;
XX
DR WPI; 2002-227118/28.
XX
PT Vaccine for immunising patient against respiratory syncytial virus, has
PT epitopes of Paramyxoviridae F protein, and cytosine followed by guanine
PT linked by phosphate bond-oligodideoxynucleotides -
XX
PS Claim 4; Page 7; 30pp; English.
XX
CC The invention describes a vaccine comprising one or more epitopes of a
CC Paramyxoviridae F protein, and one or more CpG (cytosine followed by
CC guanine linked by phosphate bond)-oligodideoxynucleotides (ODNs). The
CC vaccine is useful for vaccinating a patient especially against viruses
CC of the Paramyxoviridae family e.g. respiratory syncytial virus (RSV),
CC the primary cause of viral bronchiolitis and pneumonia in infants and
CC children, and infectious pulmonary disease in infants. RSV has been
CC particularly implicated in death of infants that are premature, have
CC bronchopulmonary dysplasia, or congenital heart conditions. This
CC sequence represents an oligodideoxynucleotide that can be used in the
CC creation of the vaccine.
XX
SQ Sequence 16 BP; 2 A; 6 C; 3 G; 5 T; 0 other;

Query Match 90.0%; Score 14.4; DB 24; Length 16;
Best Local Similarity 93.8%; Pred. No. 1.8e+02;
Matches 15; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 ACTCTGGAGCGTTCTC 16
|||||.||||||||||
Db 1 ACTCTCGAGCGTTCTC 16

RESULT 7
ABL35629
ID ABL35629 standard; DNA; 16 BP.
XX
AC ABL35629;
XX
DT 04-APR-2002 (first entry)
XX
DE Immunostimulatory oligonucleotide SEQ ID NO: 555.
XX
KW DNA/RNA hybrid; phosphorothioate backbone; immunostimulatory;
KW vaccine; infection; allergy; cancer; hypersensitivity; bio-warfare;
KW immunostimulant; antiallergic; cytostatic; antimicrobial; anti-HIV;
KW immunosuppressive; protozoacide; virucide; hepatotropic; gene therapy;
KW antiinflammatory; antibacterial; ss.
XX

```
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   misc_RNA        1..16
FT                   /*tag=  a
FT                   /note= "optionally thymidine is replaced by uracil to
FT                   form RNA or DNA/RNA hybrids. Thymidine is linked to at
FT                   least one other base through a ribose sugar"
XX
PN   WO200193902-A2.
XX
PD   13-DEC-2001.
XX
PF   07-JUN-2001; 2001WO-US18276.
XX
PR   07-JUN-2000; 2000US-209797P.
XX
PA   (BIOS-) BIOSYNEXUS INC.
XX
PI   Mond JJ,  Flora M,  Klinman DM;
XX
DR   WPI; 2002-130570/17.
XX
PT   New immunostimulatory compositions comprising RNA/DNA hybrid
PT   oligonucleotides, useful for enhancing an immune response or inducing
PT   cytokines, particularly for treating diseases, e.g. cancer, allergy or
PT   HIV infection  -
XX
PS   Example 11; Page 62; 68pp; English.
XX
CC   The present invention relates to an immunostimulatory composition, which
CC   comprises at least one oligonucleotide comprising both an RNA region and
CC   a DNA region. The composition is useful for enhancing an immune response
CC   or inducing cytokines. It can be used as a vaccine adjuvant and in
CC   treating diseases, including pathogenic infection, (non-)malignant
CC   tumours (e.g. cancers of the brain, lung, ovary, breast, prostate or
CC   colon, or carcinomas and sarcomas), autoimmune diseases or allergies
CC   (e.g. allergic rhinitis, hay fever or food allergies), Lyme disease,
CC   hepatitis, HIV or malaria. The composition is also useful for treating,
CC   preventing or ameliorating the symptoms resulting from exposure to a
CC   bio-warfare agent, e.g. Ebola, Anthrax or Listeria. The present sequence
CC   is an immunostimulatory oligonucleotide described in the exemplification
CC   of the invention.
XX
SQ   Sequence 16 BP; 2 A; 6 C; 3 G; 5 T; 0 other;

  Query Match             90.0%;  Score 14.4;  DB 24;  Length 16;
  Best Local Similarity   93.8%;  Pred. No. 1.8e+02;
  Matches   15;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 ACTCTGGAGCGTTCTC 16
              ||||| ||||||||||
Db          1 ACTCTCGAGCGTTCTC 16


RESULT 8
ABL35643
ID   ABL35643 standard; DNA; 16 BP.
XX
AC   ABL35643;
XX
DT   04-APR-2002  (first entry)
XX
DE   Immunostimulatory oligonucleotide SEQ ID NO: 569.
XX
KW   DNA/RNA hybrid; phosphorothioate backbone; immunostimulatory;
KW   vaccine; infection; allergy; cancer; hypersensitivity; bio-warfare;
KW   immunostimulant; antiallergic; cytostatic; antimicrobial; anti-HIV;
KW   immunosuppressive; protozoacide; virucide; hepatotropic; gene therapy;
KW   antiinflammatory; antibacterial; ss.
XX
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   misc_RNA        1..16
FT                   /*tag=  a
FT                   /note= "optionally thymidine is replaced by uracil to
FT                   form RNA or DNA/RNA hybrids. Thymidine is linked to at
FT                   least one other base through a ribose sugar"
XX
PN   WO200193902-A2.
XX
PD   13-DEC-2001.
XX
PF   07-JUN-2001; 2001WO-US18276.
XX
PR   07-JUN-2000; 2000US-209797P.
XX
PA   (BIOS-) BIOSYNEXUS INC.
XX
PI   Mond JJ,  Flora M,  Klinman DM;
XX
DR   WPI; 2002-130570/17.
XX
PT   New immunostimulatory compositions comprising RNA/DNA hybrid
PT   oligonucleotides, useful for enhancing an immune response or inducing
PT   cytokines, particularly for treating diseases, e.g. cancer, allergy or
PT   HIV infection  -
XX
PS   Example 11; Page 62; 68pp; English.
XX
CC   The present invention relates to an immunostimulatory composition, which
CC   comprises at least one oligonucleotide comprising both an RNA region and
CC   a DNA region. The composition is useful for enhancing an immune response
CC   or inducing cytokines. It can be used as a vaccine adjuvant and in
CC   treating diseases, including pathogenic infection, (non-)malignant
CC   tumours (e.g. cancers of the brain, lung, ovary, breast, prostate or
CC   colon, or carcinomas and sarcomas), autoimmune diseases or allergies
CC   (e.g. allergic rhinitis, hay fever or food allergies), Lyme disease,
CC   hepatitis, HIV or malaria. The composition is also useful for treating,
CC   preventing or ameliorating the symptoms resulting from exposure to a
CC   bio-warfare agent, e.g. Ebola, Anthrax or Listeria. The present sequence
CC   is an immunostimulatory oligonucleotide described in the exemplification
CC   of the invention.
XX
SQ   Sequence 16 BP; 2 A; 6 C; 3 G; 5 T; 0 other;

  Query Match             90.0%;  Score 14.4;  DB 24;  Length 16;
  Best Local Similarity   93.8%;  Pred. No. 1.8e+02;
  Matches   15;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 ACTCTGGAGCGTTCTC 16
              ||||| ||||||||||
Db          1 ACTCTCGAGCGTTCTC 16


RESULT 9
ABL35670
ID   ABL35670 standard; DNA; 16 BP.
XX
AC   ABL35670;
XX
DT   04-APR-2002  (first entry)
XX
DE   Immunostimulatory oligonucleotide SEQ ID NO: 596.
XX
KW   DNA/RNA hybrid; phosphorothioate backbone; immunostimulatory;
KW   vaccine; infection; allergy; cancer; hypersensitivity; bio-warfare;
KW   immunostimulant; antiallergic; cytostatic; antimicrobial; anti-HIV;
KW   immunosuppressive; protozoacide; virucide; hepatotropic; gene therapy;
KW   antiinflammatory; antibacterial; ss.
XX
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   misc_RNA        1..16
```

```
FT                   /*tag=  a
FT                   /note= "optionally thymidine is replaced by uracil to
FT                   form RNA or DNA/RNA hybrids. Thymidine is linked to at
FT                   least one other base through a ribose sugar"
XX
PN   WO200193902-A2.
XX
PD   13-DEC-2001.
XX
PF   07-JUN-2001; 2001WO-US18276.
XX
PR   07-JUN-2000; 2000US-209797P.
XX
PA   (BIOS-) BIOSYNEXUS INC.
XX
PI   Mond JJ,  Flora M,  Klinman DM;
XX
DR   WPI; 2002-130570/17.
XX
PT   New immunostimulatory compositions comprising RNA/DNA hybrid
PT   oligonucleotides, useful for enhancing an immune response or inducing
PT   cytokines, particularly for treating diseases, e.g. cancer, allergy or
PT   HIV infection  -
XX
PS   Example 11; Page 63; 68pp; English.
XX
CC   The present invention relates to an immunostimulatory composition, which
CC   comprises at least one oligonucleotide comprising both an RNA region and
CC   a DNA region. The composition is useful for enhancing an immune response
CC   or inducing cytokines. It can be used as a vaccine adjuvant and in
CC   treating diseases, including pathogenic infection, (non-)malignant
CC   tumours (e.g. cancers of the brain, lung, ovary, breast, prostate or
CC   colon, or carcinomas and sarcomas), autoimmune diseases or allergies
CC   (e.g. allergic rhinitis, hay fever or food allergies), Lyme disease,
CC   hepatitis, HIV or malaria. The composition is also useful for treating,
CC   preventing or ameliorating the symptoms resulting from exposure to a
CC   bio-warfare agent, e.g. Ebola, Anthrax or Listeria. The present sequence
CC   is an immunostimulatory oligonucleotide described in the exemplification
CC   of the invention.
XX
SQ   Sequence 16 BP; 2 A; 6 C; 3 G; 5 T; 0 other;

  Query Match             90.0%;  Score 14.4;  DB 24;  Length 16;
  Best Local Similarity   93.8%;  Pred. No. 1.8e+02;
  Matches   15;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 ACTCTGGAGCGTTCTC 16
              ||||| ||||||||||
Db          1 ACTCTCGAGCGTTCTC 16


RESULT 10
AAS09564
ID   AAS09564 standard; DNA; 17 BP.
XX
AC   AAS09564;
XX
DT   26-SEP-2001  (first entry)
XX
DE   Immunoreactive CpG sequence-containing oligonucleotide #14.
XX
KW   CpG sequence; immune response; non-B cell activation; interferon gamma;
KW   IFN-gamma; humoral; antibody production; interleukin-6 production;
KW   therapeutic; allergy; asthma; cancer; autoimmune disorder; infection;
KW   bio-warfare; vaccine; antisense therapy; eczema; allergic rhinitis;
KW   coryza; hay fever; urticaria; hives; food allergy; atopic condition;
KW   hepatitis; human immunodeficiency virus; HIV; malaria; Francisella;
KW   lupus erythematosus; rheumatoid arthritis; multiple sclerosis;
KW   schistosomiasis; tuberculosis; acquired immunodeficiency syndrome; AIDS;
KW   Leishmania; Ebola; Anthrax; Listeria; ss.
XX
OS   Synthetic.
XX
PN   WO200151500-A1.
XX
PD   19-JUL-2001.
XX
PF   12-JAN-2001; 2001WO-US01122.
XX
PR   14-JAN-2000; 2000US-0176115.
XX
PA   (USSH ) US DEPT HEALTH & HUMAN SERVICES.
XX
PI   Klinman D,  Ishii K,  Verthelyi D;
XX
DR   WPI; 2001-442129/47.
XX
PT   Oligodeoxynucleotides for inducing an immune response to treat and
PT   prevent an allergic reaction, cancer, an autoimmune disorder and
PT   symptoms resulting from exposure to bio-warfare agents, comprise
PT   multiple CpG sequences  -
XX
PS   Claim 5; Page 29; 48pp; English.
XX
CC   AAS09551-AAS09662 represent oligodeoxynucleotides (ODN) of at least 10
CC   nucleotides comprising multiple CpG sequences, where one of the CpG
CC   sequences is different from another of the multiple CpG sequences.
CC   The ODN are useful for inducing an immune response, preferably a cell-
CC   mediated immune response, involving non-B cell activation, interferon
CC   gamma (IFN-gamma) production or a humoral immune response involving B
CC   cell activation, antibody and interleukin-6 production in a host, for
CC   treating, preventing or ameliorating an allergic reaction, e.g. asthma,
CC   cancer, e.g. solid tumour cancer, a disease associated with the immune
CC   system e.g. autoimmune disorder or an immune system deficiency, infection
CC   or a symptom resulting from exposure to bio-warfare agent in a human. The
CC   induction of immune response improves the efficacy of a vaccine and is
CC   used in antisense therapy. The ODN are useful for treating, preventing or
CC   ameliorating allergic reactions, including eczema, allergic rhinitis or
CC   coryza, hay fever, bronchial asthma, urticaria (hives), food allergies
CC   and other atopic conditions, for improving the efficacy of vaccines
CC   against hepatitis A, B and C, human immunodeficiency virus (HIV) and
CC   malaria, for treating immune system deficiencies, e.g. lupus
CC   erythematosus and autoimmune diseases such as rheumatoid arthritis and
CC   multiple sclerosis, infections including Francisella, schistosomiasis,
CC   tuberculosis, acquired immunodeficiency syndrome (AIDS), Leishmania and
CC   symptoms resulting from exposure of bio-warfare agent, including Ebola,
CC   Anthrax and Listeria.
XX
SQ   Sequence 17 BP; 2 A; 6 C; 4 G; 5 T; 0 other;

  Query Match             90.0%;  Score 14.4;  DB 22;  Length 17;
  Best Local Similarity   93.8%;  Pred. No. 1.9e+02;
  Matches   15;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 ACTCTGGAGCGTTCTC 16
              ||||| ||||||||||
Db          2 ACTCTCGAGCGTTCTC 17


RESULT 11
AAC80594
ID   AAC80594 standard; DNA; 17 BP.
XX
AC   AAC80594;
XX
DT   14-FEB-2001  (first entry)
XX
DE   Immunogenic CpG oligodeoxynucleotide, SEQ ID NO:14.
XX
KW   CpG oligodeoxynucleotide; unmethylated; antigen-presenting cell;
KW   immunogenic; cytokine release; natural killer cell; NK cell activation;
KW   cell-mediated immune response; T-cell response; humoral response;
KW   B-cell response; antibody production; immune response induction;
KW   vaccine; allergy; asthma; infection; bacterial; viral; fungal; protozoal;
KW   parasitic; tuberculosis; AIDS; autoimmune disease; lupus erythematosus;
KW   rheumatoid arthritis; multiple sclerosis; solid tumour; cancer;
```

KW immune deficiency; biological warfare agent; cytostatic; antiarthritic;
KW antimicrobial; antiallergic; protozoacide; tuberculostatic;
KW antiasthmatic; dermatological; phosphorothioate; ss.
XX
OS Synthetic.
XX
PN WO200061151-A2.
XX
PD 19-OCT-2000.
XX
PF 12-APR-2000; 2000WO-US09839.
XX
PR 12-APR-1999; 99US-0128898.
XX
PA (KLIN/) KLINMAN D.
PA (ISHI/) ISHII K.
PA (VERT/) VERTHELYI D.
XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-006880/01.
XX
PT Novel oligonucleotides useful for the prevention and treatment of
PT allergies, cancer, and autoimmune disorders and for ameliorating
PT symptoms resulting from exposure to a bio-warfare agent -
XX
PS Claim 4; Page 26; 46pp; English.
XX
CC The invention relates to novel immunogenic CpG oligodeoxynucleotides
CC (AAC80581-C80723). The oligonucleotide are at least 10 bases long
CC and comprise one of the generic sequences 5'-NNNT-CpG-WNNN-3' or
CC 5'-RY-CpG-RY-3'. The central CpG motif is unmethylated, and the
CC oligonucleotides optionally have phosphorothioate linkages which make
CC them more resistant to degradation. The invention also relates to an
CC oligonucleotide delivery complex comprising an oligonucleotide of the
CC invention and a targetting agent, and a pharmaceutical composition
CC comprising the oligonucleotide delivery complex. The oligonucleotides
CC are able to induce either a cell-mediated (T-cell) response or a humoral
CC (B-cell, antibody) response, with oligonucleotides of the sequence
CC 5'-RY-CpG-RY-3' being able to induce a cell-mediated response, and those
CC of the sequence 5'-NNNT-CpG-WNNN-3' being able to induce a humoral
CC response. It is thought that after administration, the oligonucleotide
CC acts on antigen-presenting cells (e.g., macrophages and dendritic
CC cells), which then release cytokines, leading to activation of natural
CC killer (NK) cells. A cell-mediated or humoral response can then occur by
CC activation of T- or B-cells. The induction of an immune response is
CC useful for treating, preventing or ameliorating an allergic reaction
CC (preferably asthma), or an infection, where an immunogenic CpG
CC oligonucleotide is administered either alone or in combination with an
CC anti-allergenic agent or anti-infectious agent. The allergic conditions
CC which may be treated include eczema, allergic rhinitis, hayfever,
CC urticaria, food allergies and other atopic conditions, and the
CC infections which may be treated include viral, bacterial, fungal and
CC protozoal infections such as tuberculosis, AIDS, leishmania and
CC schistosomiasis. Immune response induction may also be used in the
CC treatment of an autoimmune disorder (e.g., lupus erythematosus,
CC rheumatoid arthritis and multiple sclerosis), a disease associated with
CC immune system deficiency, and symptoms resulting from exposure to an
CC agent of biological warfare. An immunogenic CpG oligonucleotide, either
CC alone or in combination with an anti-cancer agent, is useful for treating
CC solid tumour cancer. The induction of an immune response is used in
CC antisense therapy and to improve the efficacy of a vaccine. The
CC oligonucleotide is preferably administered to lymphocytes ex vivo,
CC producing activated lymphocytes which are then administered to the host.
CC The present sequence represents an immunogenic CpG oligodeoxynucleotide
CC of the invention.
XX
SQ Sequence 17 BP; 2 A; 6 C; 4 G; 5 T; 0 other;

Query Match 90.0%; Score 14.4; DB 22; Length 17;
Best Local Similarity 93.8%; Pred. No. 1.9e+02;
Matches 15; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 ACTCTGGAGCGTTCTC 16
||||| |||||||||||
Db 2 ACTCTCGAGCGTTCTC 17

RESULT 12
ABK46442
ID ABK46442 standard; DNA; 17 BP.
XX
AC ABK46442;
XX
DT 05-JUN-2002 (first entry)
XX
DE Immunostimulatory unmethylated CpG oligodideoxynucleotide #32.
XX
KW unmethylated CpG; oligdideoxynucleotide; ODN; virucide; vaccine;
KW Paramyxoviridae; F protein; respiratory syncytial virus; RSV;
KW viral bronchiolitis; pneumonia; infectious pulmonary disease;
KW bronchopulmonary dysplasia; congenital heart condition; ss.
XX
OS Synthetic.
XX
PN WO200211761-A2.
XX
PD 14-FEB-2002.
XX
PF 09-AUG-2001; 2001WO-US41633.
XX
PR 10-AUG-2000; 2000US-224011P.
PR 01-SEP-2000; 2000US-229307P.
XX
PA (JACK-) JACKSON FOUND ADVANCEMENT MILITARY MED.
XX
PI Mond JJ, Prince G, Klinman DM;
XX
DR WPI; 2002-227118/28.
XX
PT Vaccine for immunising patient against respiratory syncytial virus, has
PT epitopes of Paramyxoviridae F protein, and cytosine followed by guanine
PT linked by phosphate bond-oligodideoxynucleotides -
XX
PS Claim 4; Page 7; 30pp; English.
XX
CC The invention describes a vaccine comprising one or more epitopes of a
CC Paramyxoviridae F protein, and one or more CpG (cytosine followed by
CC guanine linked by phosphate bond)-oligodideoxynucleotides (ODNs). The
CC vaccine is useful for vaccinating a patient especially against viruses
CC of the Paramyxoviridae family e.g. respiratory syncytial virus (RSV),
CC the primary cause of viral bronchiolitis and pneumonia in infants and
CC children, and infectious pulmonary disease in infants. RSV has been
CC particularly implicated in death of infants that are premature, have
CC bronchopulmonary dysplasia, or congenital heart conditions. This
CC sequence represents an oligodideoxynucleotide that can be used in the
CC creation of the vaccine.
XX
SQ Sequence 17 BP; 2 A; 6 C; 4 G; 5 T; 0 other;

Query Match 90.0%; Score 14.4; DB 24; Length 17;
Best Local Similarity 93.8%; Pred. No. 1.9e+02;
Matches 15; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 ACTCTGGAGCGTTCTC 16
||||| |||||||||||
Db 2 ACTCTCGAGCGTTCTC 17

RESULT 13
AAS09561
ID AAS09561 standard; DNA; 18 BP.
XX
AC AAS09561;
XX
DT 26-SEP-2001 (first entry)

```
XX
DE   Immunoreactive CpG sequence-containing oligonucleotide #11.
XX
KW   CpG sequence; immune response; non-B cell activation; interferon gamma;
KW   IFN-gamma; humoral; antibody production; interleukin-6 production;
KW   therapeutic; allergy; asthma; cancer; autoimmune disorder; infection;
KW   bio-warfare; vaccine; antisense therapy; eczema; allergic rhinitis;
KW   coryza; hay fever; urticaria; hives; food allergy; atopic condition;
KW   hepatitis; human immunodeficiency virus; HIV; malaria; Francisella;
KW   lupus erythematosus; rheumatoid arthritis; multiple sclerosis;
KW   schistosomiasis; tuberculosis; acquired immunodeficiency syndrome; AIDS;
KW   Leishmania; Ebola; Anthrax; Listeria; ss.
XX
OS   Synthetic.
XX
PN   WO200151500-A1.
XX
PD   19-JUL-2001.
XX
PF   12-JAN-2001; 2001WO-US01122.
XX
PR   14-JAN-2000; 2000US-0176115.
XX
PA   (USSH ) US DEPT HEALTH & HUMAN SERVICES.
XX
PI   Klinman D,  Ishii K,  Verthelyi D;
XX
DR   WPI; 2001-442129/47.
XX
PT   Oligodeoxynucleotides for inducing an immune response to treat and
PT   prevent an allergic reaction, cancer, an autoimmune disorder and
PT   symptoms resulting from exposure to bio-warfare agents, comprise
PT   multiple CpG sequences  -
XX
PS   Claim 5; Page 29; 48pp; English.
XX
CC   AAS09551-AAS09662 represent oligodeoxynucleotides (ODN) of at least 10
CC   nucleotides comprising multiple CpG sequences, where one of the CpG
CC   sequences is different from another of the multiple CpG sequences.
CC   The ODN are useful for inducing an immune response, preferably a cell-
CC   mediated immune response, involving non-B cell activation, interferon
CC   gamma (IFN-gamma) production or a humoral immune response involving B
CC   cell activation, antibody and interleukin-6 production in a host, for
CC   treating, preventing or ameliorating an allergic reaction, e.g. asthma,
CC   cancer, e.g. solid tumour cancer, a disease associated with the immune
CC   system e.g. autoimmune disorder or an immune system deficiency, infection
CC   or a symptom resulting from exposure to bio-warfare agent in a human. The
CC   induction of immune response improves the efficacy of a vaccine and is
CC   used in antisense therapy. The ODN are useful for treating, preventing or
CC   ameliorating allergic reactions, including eczema, allergic rhinitis or
CC   coryza, hay fever, bronchial asthma, urticaria (hives), food allergies
CC   and other atopic conditions, for improving the efficacy of vaccines
CC   against hepatitis A, B and C, human immunodeficiency virus (HIV) and
CC   malaria, for treating immune system deficiencies, e.g. lupus
CC   erythematosus and autoimmune diseases such as rheumatoid arthritis and
CC   multiple sclerosis, infections including Francisella, schistosomiasis,
CC   tuberculosis, acquired immunodeficiency syndrome (AIDS), Leishmania and
CC   symptoms resulting from exposure of bio-warfare agent, including Ebola,
CC   Anthrax and Listeria.
XX
SQ   Sequence 18 BP; 2 A; 7 C; 4 G; 5 T; 0 other;

  Query Match             90.0%;  Score 14.4;  DB 22;  Length 18;
  Best Local Similarity   93.8%;  Pred. No. 1.9e+02;
  Matches   15;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 ACTCTGGAGCGTTCTC 16
              ||||| ||||||||||
Db          3 ACTCTCGAGCGTTCTC 18


RESULT 14
AAF99525
ID   AAF99525 standard; DNA; 18 BP.
XX
AC   AAF99525;
XX
DT   12-JUN-2001  (first entry)
XX
DE   Immunostimulatory nucleic acid #641.
XX
KW   Vaccine; cytostatic; virucidal; bactericidal; fungicidal; anti-parasitic;
KW   immunostimulatory; tumour; viral infection; bacterial infection;
KW   fungal infection; parasitic infection; cancer; asthma;
KW   infectious disease; allergy; immune deficiency; phosphorothioate; ss.
XX
OS   Synthetic.
XX
PN   WO200122972-A2.
XX
PD   05-APR-2001.
XX
PF   25-SEP-2000; 2000WO-US26383.
XX
PR   25-SEP-1999;   99US-0156113.
PR   27-SEP-1999;   99US-0156135.
PR   23-AUG-2000; 2000US-0227436.
XX
PA   (IOWA ) UNIV IOWA RES FOUND.
PA   (COLE-) COLEY PHARM GMBH.
XX
PI   Krieg AM,  Schetter C,  Vollmer J;
XX
DR   WPI; 2001-273485/28.
XX
PT   Vaccinating against tumors, infectious diseases, allergies and asthma
PT   using immunostimulatory Py-rich and TG nucleic acids -
XX
PS   Claim 101; Page 52; 338pp; English.
XX
CC   The present invention relates to a method for stimulating an immune
CC   response. The method comprises administering an immunostimulatory nucleic
CC   acid to a non-rodent subject in sufficient quantity to stimulate an
CC   immune response. The present sequence is one such immunostimulatory
CC   nucleic acid. The immunostimulatory nucleic acids can be pyrimidine rich
CC   (py-rich) or thymidine (T) rich. The method is used to vaccinate subjects
CC   against tumour antigens, viral antigens (e.g. herpesviridae, retroviridae
CC   and/or orthomyxoviridae), bacterial antigens (e.g. toxoplasma,
CC   haemophilus, campylobacter, clostridium, Escherichia coli and/or
CC   staphylococcus), fungal antigens and/or parasitic antigens. The method is
CC   also useful for preventing cancer, asthma, infectious disease, allergy or
CC   immune deficiency. The present sequence can also be used to redirect a
CC   Th2 to a Th1 immune response and to activate immune cells.
CC   Note: the present sequence may have a phosphorothioate backbone.
XX
SQ   Sequence 18 BP; 2 A; 7 C; 4 G; 5 T; 0 other;

  Query Match             90.0%;  Score 14.4;  DB 22;  Length 18;
  Best Local Similarity   93.8%;  Pred. No. 1.9e+02;
  Matches   15;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 ACTCTGGAGCGTTCTC 16
              ||||| ||||||||||
Db          3 ACTCTCGAGCGTTCTC 18


RESULT 15
AAC80591
ID   AAC80591 standard; DNA; 18 BP.
XX
AC   AAC80591;
XX
DT   14-FEB-2001  (first entry)
XX
DE   Immunogenic CpG oligodeoxynucleotide, SEQ ID NO:11.
XX
```

KW CpG oligodeoxynucleotide; unmethylated; antigen-presenting cell;
KW immunogenic; cytokine release; natural killer cell; NK cell activation;
KW cell-mediated immune response; T-cell response; humoral response;
KW B-cell response; antibody production; immune response induction;
KW vaccine; allergy; asthma; infection; bacterial; viral; fungal; protozoal;
KW parasitic; tuberculosis; AIDS; autoimmune disease; lupus erythematosus;
KW rheumatoid arthritis; multiple sclerosis; solid tumour; cancer;
KW immune deficiency; biological warfare agent; cytostatic; antiarthritic;
KW antimicrobial; antiallergic; protozoacide; tuberculostatic;
KW antiasthmatic; dermatological; phosphorothioate; ss.
XX
OS Synthetic.
XX
PN WO200061151-A2.
XX
PD 19-OCT-2000.
XX
PF 12-APR-2000; 2000WO-US09839.
XX
PR 12-APR-1999; 99US-0128898.
XX
PA (KLIN/) KLINMAN D.
PA (ISHI/) ISHII K.
PA (VERT/) VERTHELYI D.
XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-006880/01.
XX
PT Novel oligonucleotides useful for the prevention and treatment of
PT allergies, cancer, and autoimmune disorders and for ameliorating
PT symptoms resulting from exposure to a bio-warfare agent -
XX
PS Claim 4; Page 25; 46pp; English.
XX
CC The invention relates to novel immunogenic CpG oligodeoxynucleotides
CC (AAC80581-C80723). The oligonucleotide are at least 10 bases long
CC and comprise one of the generic sequences 5'-NNNT-CpG-WNNN-3' or
CC 5'-RY-CpG-RY-3'. The central CpG motif is unmethylated, and the
CC oligonucleotides optionally have phosphorothioate linkages which make
CC them more resistant to degradation. The invention also relates to an
CC oligonucleotide delivery complex comprising an oligonucleotide of the
CC invention and a targetting agent, and a pharmaceutical composition
CC comprising the oligonucleotide delivery complex. The oligonucleotides
CC are able to induce either a cell-mediated (T-cell) response or a humoral
CC (B-cell, antibody) response, with oligonucleotides of the sequence
CC 5'-RY-CpG-RY-3' being able to induce a cell-mediated response, and those
CC of the sequence 5'-NNNT-CpG-WNNN-3' being able to induce a humoral
CC response. It is thought that after administration, the oligonucleotide
CC acts on antigen-presenting cells (e.g., macrophages and dendritic
CC cells), which then release cytokines, leading to activation of natural
CC killer (NK) cells. A cell-mediated or humoral response can then occur by
CC activation of T- or B-cells. The induction of an immune response is
CC useful for treating, preventing or ameliorating an allergic reaction
CC (preferably asthma), or an infection, where an immunogenic CpG
CC oligonucleotide is administered either alone or in combination with an
CC anti-allergenic agent or anti-infectious agent. The allergic conditions
CC which may be treated include eczema, allergic rhinitis, hayfever,
CC urticaria, food allergies and other atopic conditions, and the
CC infections which may be treated include viral, bacterial, fungal and
CC protozoal infections such as tuberculosis, AIDS, leishmania and
CC schistosomiasis. Immune response induction may also be used in the
CC treatment of an autoimmune disorder (e.g., lupus erythematosus,
CC rheumatoid arthritis and multiple sclerosis), a disease associated with
CC immune system deficiency, and symptoms resulting from exposure to an
CC agent of biological warfare. An immunogenic CpG oligonucleotide, either
CC alone or in combination with an anti-cancer agent, is useful for treating
CC solid tumour cancer. The induction of an immune response is used in
CC antisense therapy and to improve the efficacy of a vaccine. The
CC oligonucleotide is preferably administered to lymphocytes ex vivo,
CC producing activated lymphocytes which are then administered to the host.
CC The present sequence represents an immunogenic CpG oligodeoxynucleotide
CC of the invention.

XX
SQ Sequence 18 BP; 2 A; 7 C; 4 G; 5 T; 0 other;

Query Match 90.0%; Score 14.4; DB 22; Length 18;
Best Local Similarity 93.8%; Pred. No. 1.9e+02;
Matches 15; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 ACTCTGGAGCGTTCTC 16
||||| ||||||||||
Db 3 ACTCTCGAGCGTTCTC 18

Search completed: January 20, 2004, 17:31:48
Job time : 100.765 secs

GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: January 20, 2004, 16:34:44 ; Search time 26.3529 Seconds
(without alignments)
267.983 Million cell updates/sec

Title: US-10-068-160-73
Perfect score: 16
Sequence: 1 actctggagcgttctc 16

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 569978 seqs, 220691566 residues

Total number of hits satisfying chosen parameters: 1139956

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued_Patents_NA:*
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3: /cgn2_6/ptodata/2/ina/6A_COMB.seq:*
4: /cgn2_6/ptodata/2/ina/6B_COMB.seq:*
5: /cgn2_6/ptodata/2/ina/PCTUS_COMB.seq:*
6: /cgn2_6/ptodata/2/ina/backfiles1.seq:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	14.4	90.0	20	3	US-08-386-063-8	Sequence 8, Appli
2	14.4	90.0	20	3	US-08-386-063-10	Sequence 10, Appl
3	14.4	90.0	20	3	US-08-386-063-8	Sequence 8, Appli
4	14.4	90.0	20	3	US-08-386-063-10	Sequence 10, Appl
5	14.4	90.0	20	3	US-08-738-652-18	Sequence 18, Appl
6	14.4	90.0	20	3	US-08-738-652-19	Sequence 19, Appl
7	14.4	90.0	20	3	US-08-738-652-20	Sequence 20, Appl
8	14.4	90.0	20	3	US-08-738-652-21	Sequence 21, Appl
9	14.4	90.0	20	3	US-09-286-098-7	Sequence 7, Appli
10	14.4	90.0	20	3	US-09-286-098-8	Sequence 8, Appli
11	14.4	90.0	20	3	US-09-286-098-9	Sequence 9, Appli
12	14.4	90.0	20	3	US-09-286-098-10	Sequence 10, Appl
13	14.4	90.0	20	3	US-09-286-098-37	Sequence 37, Appl
14	14.4	90.0	20	3	US-09-286-098-40	Sequence 40, Appl
15	14.4	90.0	20	3	US-08-960-774-15	Sequence 15, Appl
16	14.4	90.0	20	3	US-08-960-774-17	Sequence 17, Appl
17	14.4	90.0	20	4	US-09-325-193A-7	Sequence 7, Appli
18	14.4	90.0	20	4	US-09-325-193A-8	Sequence 8, Appli
19	14.4	90.0	20	4	US-09-325-193A-9	Sequence 9, Appli
20	14.4	90.0	20	4	US-09-325-193A-31	Sequence 31, Appl
21	14.4	90.0	20	4	US-09-325-193A-33	Sequence 33, Appl
22	14.4	90.0	20	4	US-09-325-193A-34	Sequence 34, Appl
23	14.4	90.0	20	4	US-09-191-170-7	Sequence 7, Appli
24	14.4	90.0	20	4	US-09-191-170-8	Sequence 8, Appli
25	14.4	90.0	20	4	US-09-191-170-9	Sequence 9, Appli
26	14.4	90.0	20	4	US-09-191-170-10	Sequence 10, Appl
27	14.4	90.0	20	4	US-09-191-170-37	Sequence 37, Appl
28	14.4	90.0	21	3	US-09-286-098-39	Sequence 39, Appl
c 29	14.4	90.0	1997	2	US-08-750-134A-6	Sequence 6, Appli
c 30	14.4	90.0	1997	3	US-09-363-745-6	Sequence 6, Appli
31	14.4	90.0	10917	3	US-08-926-842B-11	Sequence 11, Appl
32	14.4	90.0	62804	4	US-09-800-960-3	Sequence 3, Appli
33	14	87.5	20	3	US-08-386-063-9	Sequence 9, Appli
34	14	87.5	20	3	US-08-386-063-9	Sequence 9, Appli
35	14	87.5	20	3	US-08-960-774-16	Sequence 16, Appl
36	13.4	83.8	20	3	US-08-386-063-11	Sequence 11, Appl
37	13.4	83.8	20	3	US-08-386-063-11	Sequence 11, Appl
38	13.4	83.8	20	3	US-08-960-774-18	Sequence 18, Appl
39	13.4	83.8	81	1	US-08-238-863-22	Sequence 22, Appl
40	13.4	83.8	81	1	US-08-238-863-45	Sequence 45, Appl
41	13.4	83.8	81	1	US-08-443-407-22	Sequence 22, Appl
42	13.4	83.8	81	1	US-08-443-407-45	Sequence 45, Appl
43	13.4	83.8	81	5	PCT-US95-05600-166	Sequence 166, App
44	13.4	83.8	81	5	PCT-US95-05600-189	Sequence 189, App
c 45	13.4	83.8	88	4	US-09-463-458A-12	Sequence 12, Appl

ALIGNMENTS

RESULT 1
US-08-386-063-8
; Sequence 8, Application US/08386063
; Patent No. 6008200
; GENERAL INFORMATION:
; APPLICANT: Arthur M. Krieg, M.D.
; TITLE OF INVENTION: IMMUNOMODULATORY OLIGONUCLEOTIDES
; NUMBER OF SEQUENCES: 27
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: LAHIVE & COCKFIELD
; STREET: 60 STATE STREET, SUITE 510
; CITY: BOSTON
; STATE: MASSACHUSETTS
; COUNTRY: USA
; ZIP: 02109-1875
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: ASCII text
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/386,063
; FILING DATE:
; CLASSIFICATION: 424
; ATTORNEY/AGENT INFORMATION:
; NAME: ARNOLD, BETH E.
; REGISTRATION NUMBER: 35,430
; REFERENCE/DOCKET NUMBER: UIZ-013CP
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (617)227-7400
; TELEFAX: (617)227-5941
; INFORMATION FOR SEQ ID NO: 8:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 20 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: DNA
US-08-386-063-8

Query Match 90.0%; Score 14.4; DB 3; Length 20;
Best Local Similarity 93.8%; Pred. No. 22;
Matches 15; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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Qy          1 ACTCTGGAGCGTTCTC 16
              ||||| ||||||||||
Db          5 ACTCTCGAGCGTTCTC 20
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RESULT 2

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US-08-386-063-10
; Sequence 10, Application US/08386063
; Patent No. 6008200
;  GENERAL INFORMATION:
;    APPLICANT:  Arthur M. Krieg, M.D.
;    TITLE OF INVENTION:  IMMUNOMODULATORY OLIGONUCLEOTIDES
;    NUMBER OF SEQUENCES:  27
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  LAHIVE & COCKFIELD
;      STREET:  60 STATE STREET, SUITE 510
;      CITY:  BOSTON
;      STATE:  MASSACHUSETTS
;      COUNTRY:  USA
;      ZIP:  02109-1875
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  ASCII text
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/386,063
;      FILING DATE:
;      CLASSIFICATION:  424
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  ARNOLD, BETH E.
;      REGISTRATION NUMBER:  35,430
;      REFERENCE/DOCKET NUMBER:  UIZ-013CP
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (617)227-7400
;      TELEFAX:  (617)227-5941
;  INFORMATION FOR SEQ ID NO:  10:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  20 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  DNA
;    FEATURE:
;      NAME/KEY:  misc_feature
;      LOCATION:  3
;      OTHER INFORMATION:  "N indicates 5 methyl cytosine"
US-08-386-063-10

  Query Match             90.0%;  Score 14.4;  DB 3;  Length 20;
  Best Local Similarity   93.8%;  Pred. No. 22;
  Matches   15;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 ACTCTGGAGCGTTCTC 16
              ||||| ||||||||||
Db          5 ACTCTCGAGCGTTCTC 20


RESULT 3
US-08-386-063-8
; Sequence 8, Application US/08386063
; Patent No. 6194388
;  GENERAL INFORMATION:
;    APPLICANT:  Arthur M. Krieg, M.D.
;    TITLE OF INVENTION:  IMMUNOMODULATORY OLIGONUCLEOTIDES
;    NUMBER OF SEQUENCES:  27
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  LAHIVE & COCKFIELD
;      STREET:  60 STATE STREET, SUITE 510
;      CITY:  BOSTON
;      STATE:  MASSACHUSETTS
;      COUNTRY:  USA
;      ZIP:  02109-1875
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  ASCII text
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/386,063
;      FILING DATE:
;      CLASSIFICATION:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  ARNOLD, BETH E.
;      REGISTRATION NUMBER:  35,430
;      REFERENCE/DOCKET NUMBER:  UIZ-013CP
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (617)227-7400
;      TELEFAX:  (617)227-5941
;  INFORMATION FOR SEQ ID NO:  8:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  20 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  DNA
US-08-386-063-8

  Query Match             90.0%;  Score 14.4;  DB 3;  Length 20;
  Best Local Similarity   93.8%;  Pred. No. 22;
  Matches   15;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 ACTCTGGAGCGTTCTC 16
              ||||| ||||||||||
Db          5 ACTCTCGAGCGTTCTC 20


RESULT 4
US-08-386-063-10
; Sequence 10, Application US/08386063
; Patent No. 6194388
;  GENERAL INFORMATION:
;    APPLICANT:  Arthur M. Krieg, M.D.
;    TITLE OF INVENTION:  IMMUNOMODULATORY OLIGONUCLEOTIDES
;    NUMBER OF SEQUENCES:  27
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  LAHIVE & COCKFIELD
;      STREET:  60 STATE STREET, SUITE 510
;      CITY:  BOSTON
;      STATE:  MASSACHUSETTS
;      COUNTRY:  USA
;      ZIP:  02109-1875
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  ASCII text
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/386,063
;      FILING DATE:
;      CLASSIFICATION:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  ARNOLD, BETH E.
;      REGISTRATION NUMBER:  35,430
;      REFERENCE/DOCKET NUMBER:  UIZ-013CP
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (617)227-7400
;      TELEFAX:  (617)227-5941
;  INFORMATION FOR SEQ ID NO:  10:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  20 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  DNA
;    FEATURE:
;      NAME/KEY:  misc_feature
;      LOCATION:  3
;      OTHER INFORMATION:  "N indicates 5 methyl cytosine"
US-08-386-063-10

  Query Match             90.0%;  Score 14.4;  DB 3;  Length 20;
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  Best Local Similarity   93.8%;  Pred. No. 22;
  Matches   15;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 ACTCTGGAGCGTTCTC 16
              ||||| ||||||||||
Db          5 ACTCTCGAGCGTTCTC 20


RESULT 5
US-08-738-652-18
; Sequence 18, Application US/08738652B
; Patent No. 6207646
; GENERAL INFORMATION:
;  APPLICANT: Krieg, Arthur M.
;  TITLE OF INVENTION: Immunostimulatory Nucleic Acid Molecules
;  FILE REFERENCE: C1039/7004 HCL
;  CURRENT APPLICATION NUMBER: US/08/738,652B
;  CURRENT FILING DATE: 1996-10-30
;  EARLIER APPLICATION NUMBER: US 08/276,358
;  EARLIER FILING DATE: 1994-07-15
;  EARLIER APPLICATION NUMBER: US 08/386,063
;  EARLIER FILING DATE: 1995-02-07
;  NUMBER OF SEQ ID NOS: 55
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 18
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic oligonucleotide
US-08-738-652-18

  Query Match             90.0%;  Score 14.4;  DB 3;  Length 20;
  Best Local Similarity   93.8%;  Pred. No. 22;
  Matches   15;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 ACTCTGGAGCGTTCTC 16
              ||||| ||||||||||
Db          5 ACTCTCGAGCGTTCTC 20


RESULT 6
US-08-738-652-19
; Sequence 19, Application US/08738652B
; Patent No. 6207646
; GENERAL INFORMATION:
;  APPLICANT: Krieg, Arthur M.
;  TITLE OF INVENTION: Immunostimulatory Nucleic Acid Molecules
;  FILE REFERENCE: C1039/7004 HCL
;  CURRENT APPLICATION NUMBER: US/08/738,652B
;  CURRENT FILING DATE: 1996-10-30
;  EARLIER APPLICATION NUMBER: US 08/276,358
;  EARLIER FILING DATE: 1994-07-15
;  EARLIER APPLICATION NUMBER: US 08/386,063
;  EARLIER FILING DATE: 1995-02-07
;  NUMBER OF SEQ ID NOS: 55
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 19
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic oligonucleotide
;   FEATURE:
;   NAME/KEY: modified_base
;   LOCATION: (3)...(3)
;   OTHER INFORMATION: m5c
;   FEATURE:
;   NAME/KEY: modified_base
;   LOCATION: (10)...(10)
;   OTHER INFORMATION: m5c
;   FEATURE:
;   NAME/KEY: modified_base
;   LOCATION: (14)...(14)
;   OTHER INFORMATION: m5c
US-08-738-652-19

  Query Match             90.0%;  Score 14.4;  DB 3;  Length 20;
  Best Local Similarity   93.8%;  Pred. No. 22;
  Matches   15;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 ACTCTGGAGCGTTCTC 16
              ||||| ||||||||||
Db          5 ACTCTCGAGCGTTCTC 20


RESULT 7
US-08-738-652-20
; Sequence 20, Application US/08738652B
; Patent No. 6207646
; GENERAL INFORMATION:
;  APPLICANT: Krieg, Arthur M.
;  TITLE OF INVENTION: Immunostimulatory Nucleic Acid Molecules
;  FILE REFERENCE: C1039/7004 HCL
;  CURRENT APPLICATION NUMBER: US/08/738,652B
;  CURRENT FILING DATE: 1996-10-30
;  EARLIER APPLICATION NUMBER: US 08/276,358
;  EARLIER FILING DATE: 1994-07-15
;  EARLIER APPLICATION NUMBER: US 08/386,063
;  EARLIER FILING DATE: 1995-02-07
;  NUMBER OF SEQ ID NOS: 55
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 20
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic oligonucleotide
;   FEATURE:
;   NAME/KEY: modified_base
;   LOCATION: (3)...(3)
;   OTHER INFORMATION: m5c
US-08-738-652-20

  Query Match             90.0%;  Score 14.4;  DB 3;  Length 20;
  Best Local Similarity   93.8%;  Pred. No. 22;
  Matches   15;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 ACTCTGGAGCGTTCTC 16
              ||||| ||||||||||
Db          5 ACTCTCGAGCGTTCTC 20


RESULT 8
US-08-738-652-21
; Sequence 21, Application US/08738652B
; Patent No. 6207646
; GENERAL INFORMATION:
;  APPLICANT: Krieg, Arthur M.
;  TITLE OF INVENTION: Immunostimulatory Nucleic Acid Molecules
;  FILE REFERENCE: C1039/7004 HCL
;  CURRENT APPLICATION NUMBER: US/08/738,652B
;  CURRENT FILING DATE: 1996-10-30
;  EARLIER APPLICATION NUMBER: US 08/276,358
;  EARLIER FILING DATE: 1994-07-15
;  EARLIER APPLICATION NUMBER: US 08/386,063
;  EARLIER FILING DATE: 1995-02-07
;  NUMBER OF SEQ ID NOS: 55
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 21
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic oligonucleotide
;   FEATURE:
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;   NAME/KEY: modified_base
;   LOCATION: (18)...(18)
;   OTHER INFORMATION: m5c
US-08-738-652-21

  Query Match             90.0%;  Score 14.4;  DB 3;  Length 20;
  Best Local Similarity   93.8%;  Pred. No. 22;
  Matches   15;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 ACTCTGGAGCGTTCTC 16
              ||||| ||||||||||
Db          5 ACTCTCGAGCGTTCTC 20


RESULT 9
US-09-286-098-7
; Sequence 7, Application US/09286098
; Patent No. 6218371
; GENERAL INFORMATION:
;  APPLICANT: Krieg, Arthur M.
;  APPLICANT: Weiner, George
;  TITLE OF INVENTION: Methods and Products for Stimulating the
;  TITLE OF INVENTION: Immune System Using Immunotherapeutic Oligonucleotides and
;  TITLE OF INVENTION: Cytokines
;  FILE REFERENCE: C1039/7026/HCL
;  CURRENT APPLICATION NUMBER: US/09/286,098
;  CURRENT FILING DATE: 1999-04-02
;  EARLIER APPLICATION NUMBER: US 60/080,729
;  EARLIER FILING DATE: 1998-04-03
;  NUMBER OF SEQ ID NOS: 105
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 7
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: SArtificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic Sequence
US-09-286-098-7

  Query Match             90.0%;  Score 14.4;  DB 3;  Length 20;
  Best Local Similarity   93.8%;  Pred. No. 22;
  Matches   15;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 ACTCTGGAGCGTTCTC 16
              ||||| ||||||||||
Db          5 ACTCTCGAGCGTTCTC 20


RESULT 10
US-09-286-098-8
; Sequence 8, Application US/09286098
; Patent No. 6218371
; GENERAL INFORMATION:
;  APPLICANT: Krieg, Arthur M.
;  APPLICANT: Weiner, George
;  TITLE OF INVENTION: Methods and Products for Stimulating the
;  TITLE OF INVENTION: Immune System Using Immunotherapeutic Oligonucleotides and
;  TITLE OF INVENTION: Cytokines
;  FILE REFERENCE: C1039/7026/HCL
;  CURRENT APPLICATION NUMBER: US/09/286,098
;  CURRENT FILING DATE: 1999-04-02
;  EARLIER APPLICATION NUMBER: US 60/080,729
;  EARLIER FILING DATE: 1998-04-03
;  NUMBER OF SEQ ID NOS: 105
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 8
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic Sequence
;   FEATURE:
;   NAME/KEY: modified_base
;   LOCATION: (3)...(3)
;   OTHER INFORMATION: m5c
;   FEATURE:
;   NAME/KEY: modified_base
;   LOCATION: (10)...(10)
;   OTHER INFORMATION: m5c
;   FEATURE:
;   NAME/KEY: modified_base
;   LOCATION: (14)...(14)
;   OTHER INFORMATION: m5c
US-09-286-098-8

  Query Match             90.0%;  Score 14.4;  DB 3;  Length 20;
  Best Local Similarity   93.8%;  Pred. No. 22;
  Matches   15;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 ACTCTGGAGCGTTCTC 16
              ||||| ||||||||||
Db          5 ACTCTCGAGCGTTCTC 20


RESULT 11
US-09-286-098-9
; Sequence 9, Application US/09286098
; Patent No. 6218371
; GENERAL INFORMATION:
;  APPLICANT: Krieg, Arthur M.
;  APPLICANT: Weiner, George
;  TITLE OF INVENTION: Methods and Products for Stimulating the
;  TITLE OF INVENTION: Immune System Using Immunotherapeutic Oligonucleotides and
;  TITLE OF INVENTION: Cytokines
;  FILE REFERENCE: C1039/7026/HCL
;  CURRENT APPLICATION NUMBER: US/09/286,098
;  CURRENT FILING DATE: 1999-04-02
;  EARLIER APPLICATION NUMBER: US 60/080,729
;  EARLIER FILING DATE: 1998-04-03
;  NUMBER OF SEQ ID NOS: 105
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 9
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic Sequence
;   FEATURE:
;   NAME/KEY: modified_base
;   LOCATION: (3)...(3)
;   OTHER INFORMATION: m5c
US-09-286-098-9

  Query Match             90.0%;  Score 14.4;  DB 3;  Length 20;
  Best Local Similarity   93.8%;  Pred. No. 22;
  Matches   15;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 ACTCTGGAGCGTTCTC 16
              ||||| ||||||||||
Db          5 ACTCTCGAGCGTTCTC 20


RESULT 12
US-09-286-098-10
; Sequence 10, Application US/09286098
; Patent No. 6218371
; GENERAL INFORMATION:
;  APPLICANT: Krieg, Arthur M.
;  APPLICANT: Weiner, George
;  TITLE OF INVENTION: Methods and Products for Stimulating the
;  TITLE OF INVENTION: Immune System Using Immunotherapeutic Oligonucleotides and
;  TITLE OF INVENTION: Cytokines
;  FILE REFERENCE: C1039/7026/HCL
;  CURRENT APPLICATION NUMBER: US/09/286,098
;  CURRENT FILING DATE: 1999-04-02
;  EARLIER APPLICATION NUMBER: US 60/080,729
```

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;  EARLIER FILING DATE: 1998-04-03
;  NUMBER OF SEQ ID NOS: 105
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 10
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic Sequence
;   FEATURE:
;   NAME/KEY: modified_base
;   LOCATION: (18)...(18)
;   OTHER INFORMATION: m5c
US-09-286-098-10

  Query Match             90.0%;  Score 14.4;  DB 3;  Length 20;
  Best Local Similarity   93.8%;  Pred. No. 22;
  Matches   15;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 ACTCTGGAGCGTTCTC 16
              ||||| ||||||||||
Db          5 ACTCTCGAGCGTTCTC 20


RESULT 13
US-09-286-098-37
; Sequence 37, Application US/09286098
; Patent No. 6218371
; GENERAL INFORMATION:
;  APPLICANT: Krieg, Arthur M.
;  APPLICANT: Weiner, George
;  TITLE OF INVENTION: Methods and Products for Stimulating the
;  TITLE OF INVENTION: Immune System Using Immunotherapeutic Oligonucleotides and
;  TITLE OF INVENTION: Cytokines
;  FILE REFERENCE: C1039/7026/HCL
;  CURRENT APPLICATION NUMBER: US/09/286,098
;  CURRENT FILING DATE: 1999-04-02
;  EARLIER APPLICATION NUMBER: US 60/080,729
;  EARLIER FILING DATE: 1998-04-03
;  NUMBER OF SEQ ID NOS: 105
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 37
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic Sequence
US-09-286-098-37

  Query Match             90.0%;  Score 14.4;  DB 3;  Length 20;
  Best Local Similarity   93.8%;  Pred. No. 22;
  Matches   15;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 ACTCTGGAGCGTTCTC 16
              ||||| ||||||||||
Db          5 ACTCTCGAGCGTTCTC 20


RESULT 14
US-09-286-098-40
; Sequence 40, Application US/09286098
; Patent No. 6218371
; GENERAL INFORMATION:
;  APPLICANT: Krieg, Arthur M.
;  APPLICANT: Weiner, George
;  TITLE OF INVENTION: Methods and Products for Stimulating the
;  TITLE OF INVENTION: Immune System Using Immunotherapeutic Oligonucleotides and
;  TITLE OF INVENTION: Cytokines
;  FILE REFERENCE: C1039/7026/HCL
;  CURRENT APPLICATION NUMBER: US/09/286,098
;  CURRENT FILING DATE: 1999-04-02
;  EARLIER APPLICATION NUMBER: US 60/080,729
;  EARLIER FILING DATE: 1998-04-03
;  NUMBER OF SEQ ID NOS: 105
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 40
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic Sequence
;   FEATURE:
;   NAME/KEY: modified_base
;   LOCATION: (14)...(14)
;   OTHER INFORMATION: m5c
US-09-286-098-40

  Query Match             90.0%;  Score 14.4;  DB 3;  Length 20;
  Best Local Similarity   93.8%;  Pred. No. 22;
  Matches   15;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 ACTCTGGAGCGTTCTC 16
              ||||| ||||||||||
Db          5 ACTCTCGAGCGTTCTC 20


RESULT 15
US-08-960-774-15
; Sequence 15, Application US/08960774
; Patent No. 6239116
;  GENERAL INFORMATION:
;    APPLICANT:  Krieg et al.,
;    TITLE OF INVENTION:  IMMUNOSTIMULATORY NUCLEIC ACID MOLECULES
;    NUMBER OF SEQUENCES:  111
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Fish & Richardson P.C.
;      STREET:  4225 Executive Square, Suite 1400
;      CITY:  La Jolla
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  92037
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  ASCII text
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/960,774
;      FILING DATE:  30-October-1997
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  U.S. Serial No. 6239116  08/738,652
;      FILING DATE:  October 30, 1996
;      CLASSIFICATION:  514
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Haile, Lisa A.
;      REGISTRATION NUMBER:  38,347
;      REFERENCE/DOCKET NUMBER:  08918/012001
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  619/678-5070
;      TELEFAX:  619/678-5099
;  INFORMATION FOR SEQ ID NO:  15:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  20 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  DNA
US-08-960-774-15

  Query Match             90.0%;  Score 14.4;  DB 3;  Length 20;
  Best Local Similarity   93.8%;  Pred. No. 22;
  Matches   15;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 ACTCTGGAGCGTTCTC 16
              ||||| ||||||||||
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Db 5 ACTCTCGAGCGTTCTC 20

Search completed: January 20, 2004, 17:17:11
Job time : 27.3529 secs

GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: January 20, 2004, 16:34:44 ; Search time 105.882 Seconds
(without alignments)
532.631 Million cell updates/sec

Title: US-10-068-160-73
Perfect score: 16
Sequence: 1 actctggagcgttctc 16

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 2324096 seqs, 1762381658 residues

Total number of hits satisfying chosen parameters: 4648192

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published_Applications_NA:*
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2: /cgn2_6/ptodata/1/pubpna/PCT_NEW_PUB.seq:*
3: /cgn2_6/ptodata/1/pubpna/US06_NEW_PUB.seq:*
4: /cgn2_6/ptodata/1/pubpna/US06_PUBCOMB.seq:*
5: /cgn2_6/ptodata/1/pubpna/US07_NEW_PUB.seq:*
6: /cgn2_6/ptodata/1/pubpna/PCTUS_PUBCOMB.seq:*
7: /cgn2_6/ptodata/1/pubpna/US08_NEW_PUB.seq:*
8: /cgn2_6/ptodata/1/pubpna/US08_PUBCOMB.seq:*
9: /cgn2_6/ptodata/1/pubpna/US09A_PUBCOMB.seq:*
10: /cgn2_6/ptodata/1/pubpna/US09B_PUBCOMB.seq:*
11: /cgn2_6/ptodata/1/pubpna/US09C_PUBCOMB.seq:*
12: /cgn2_6/ptodata/1/pubpna/US09_NEW_PUB.seq:*
13: /cgn2_6/ptodata/1/pubpna/US09_NEW_PUB.seq2:*
14: /cgn2_6/ptodata/1/pubpna/US10A_PUBCOMB.seq:*
15: /cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
16: /cgn2_6/ptodata/1/pubpna/US10_NEW_PUB.seq:*
17: /cgn2_6/ptodata/1/pubpna/US60_NEW_PUB.seq:*
18: /cgn2_6/ptodata/1/pubpna/US60_PUBCOMB.seq:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	16	100.0	16	13	US-10-194-035-113	Sequence 113, App
2	16	100.0	16	15	US-10-068-160-73	Sequence 73, Appl
c 3	15	93.8	1125	10	US-09-738-626-3346	Sequence 3346, Ap
4	15	93.8	3309400	10	US-09-738-626-1	Sequence 1, Appli
5	14.4	90.0	16	13	US-10-194-035-7	Sequence 7, Appli
6	14.4	90.0	16	15	US-10-068-160-9	Sequence 9, Appli
7	14.4	90.0	17	13	US-10-194-035-14	Sequence 14, Appl
8	14.4	90.0	18	11	US-09-888-326-188	Sequence 188, App
9	14.4	90.0	18	11	US-09-776-479-724	Sequence 724, App
10	14.4	90.0	18	13	US-10-194-035-11	Sequence 11, Appl
11	14.4	90.0	18	15	US-10-112-653-697	Sequence 697, App
12	14.4	90.0	18	15	US-10-017-995-724	Sequence 724, App
13	14.4	90.0	19	13	US-10-194-035-5	Sequence 5, Appli
14	14.4	90.0	19	15	US-10-068-160-8	Sequence 8, Appli
15	14.4	90.0	20	9	US-09-824-468-7	Sequence 7, Appli
16	14.4	90.0	20	9	US-09-824-468-8	Sequence 8, Appli
17	14.4	90.0	20	9	US-09-824-468-9	Sequence 9, Appli
18	14.4	90.0	20	9	US-09-824-468-10	Sequence 10, Appl
19	14.4	90.0	20	9	US-09-824-468-37	Sequence 37, Appl
20	14.4	90.0	20	9	US-09-824-468-40	Sequence 40, Appl
21	14.4	90.0	20	10	US-09-800-266A-7	Sequence 7, Appli
22	14.4	90.0	20	10	US-09-800-266A-8	Sequence 8, Appli
23	14.4	90.0	20	10	US-09-800-266A-9	Sequence 9, Appli
24	14.4	90.0	20	10	US-09-800-266A-31	Sequence 31, Appl
25	14.4	90.0	20	10	US-09-800-266A-33	Sequence 33, Appl
26	14.4	90.0	20	10	US-09-800-266A-34	Sequence 34, Appl
27	14.4	90.0	20	10	US-09-846-091-5	Sequence 5, Appli
28	14.4	90.0	20	10	US-09-895-007A-7	Sequence 7, Appli
29	14.4	90.0	20	10	US-09-895-007A-8	Sequence 8, Appli
30	14.4	90.0	20	10	US-09-895-007A-9	Sequence 9, Appli
31	14.4	90.0	20	10	US-09-895-007A-31	Sequence 31, Appl
32	14.4	90.0	20	10	US-09-895-007A-33	Sequence 33, Appl
33	14.4	90.0	20	10	US-09-895-007A-34	Sequence 34, Appl
34	14.4	90.0	20	10	US-09-920-313-7	Sequence 7, Appli
35	14.4	90.0	20	10	US-09-920-313-8	Sequence 8, Appli
36	14.4	90.0	20	10	US-09-920-313-9	Sequence 9, Appli
37	14.4	90.0	20	10	US-09-920-313-31	Sequence 31, Appl
38	14.4	90.0	20	10	US-09-920-313-33	Sequence 33, Appl
39	14.4	90.0	20	10	US-09-920-313-34	Sequence 34, Appl
40	14.4	90.0	20	11	US-09-927-422A-22	Sequence 22, Appl
41	14.4	90.0	20	11	US-09-415-142-8	Sequence 8, Appli
42	14.4	90.0	20	11	US-09-415-142-10	Sequence 10, Appl
43	14.4	90.0	20	11	US-09-888-326-91	Sequence 91, Appl
44	14.4	90.0	20	11	US-09-888-326-92	Sequence 92, Appl
45	14.4	90.0	20	11	US-09-888-326-102	Sequence 102, App

ALIGNMENTS

RESULT 1
US-10-194-035-113
; Sequence 113, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
; APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
; APPLICANT: SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
; APPLICANT: KLINMAN, Dennis
; APPLICANT: ISHII, Ken
; APPLICANT: VERTHELYI, Daniela
; TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
; FILE REFERENCE: 4239-63317
; CURRENT APPLICATION NUMBER: US/10/194,035
; CURRENT FILING DATE: 2002-07-12
; PRIOR APPLICATION NUMBER: PCT/US01/01122
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: US 60/176,115
; PRIOR FILING DATE: 2000-01-14
; NUMBER OF SEQ ID NOS: 119
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 113
; LENGTH: 16
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-113

Query Match 100.0%; Score 16; DB 13; Length 16;
Best Local Similarity 100.0%; Pred. No. 35;
Matches 16; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 ACTCTGGAGCGTTCTC 16
              ||||||||||||||||
Db          1 ACTCTGGAGCGTTCTC 16
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RESULT 2

US-10-068-160-73
; Sequence 73, Application US/10068160
; Publication No. US20030060440A1
; GENERAL INFORMATION:
; APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA, REPRESENTED BY THE
; APPLICANT: SECRETARY, DEPARTMENT OF HEALTH AND HUMAN SERVICES
; APPLICANT: KLINMAN, Dennis
; APPLICANT: ISHII, Ken
; APPLICANT: VERTHELYI, Daniela
; TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
; FILE REFERENCE: 4239-61999
; CURRENT APPLICATION NUMBER: US/10/068,160
; CURRENT FILING DATE: 2002-02-06
; PRIOR APPLICATION NUMBER: 60/128,898
; PRIOR FILING DATE: 1999-04-12
; NUMBER OF SEQ ID NOS: 120
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 73
; LENGTH: 16
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Oligonucleotide
US-10-068-160-73

Query Match 100.0%; Score 16; DB 15; Length 16;
Best Local Similarity 100.0%; Pred. No. 35;
Matches 16; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 ACTCTGGAGCGTTCTC 16
||||||||||||||||
Db 1 ACTCTGGAGCGTTCTC 16

RESULT 3
US-09-738-626-3346/c
; Sequence 3346, Application US/09738626
; Publication No. US20020197605A1
; GENERAL INFORMATION:
; APPLICANT: NAKAGAWA, SATOSHI
; APPLICANT: MIZOGUCHI, HIROSHI
; APPLICANT: ANDO, SEIKO
; APPLICANT: HAYASHI, MIKIRO
; APPLICANT: OCHIAI, KEIKO
; APPLICANT: YOKOI, HARUHIKO
; APPLICANT: TATEISHI, NAOKO
; APPLICANT: SENOH, AKIHIRO
; APPLICANT: IKEDA, MASATO
; APPLICANT: OZAKI, AKIO
; TITLE OF INVENTION: NOVEL POLYNUCLEOTIDES
; FILE REFERENCE: 249-125
; CURRENT APPLICATION NUMBER: US/09/738,626
; CURRENT FILING DATE: 2000-12-18
; PRIOR APPLICATION NUMBER: JP 99/377484
; PRIOR FILING DATE: 1999-12-16
; PRIOR APPLICATION NUMBER: JP 00/159162
; PRIOR FILING DATE: 2000-04-07
; PRIOR APPLICATION NUMBER: JP 00/280988
; PRIOR FILING DATE: 2000-08-03
; NUMBER OF SEQ ID NOS: 7059
; SOFTWARE: PatentIn ver. 3.0
; SEQ ID NO 3346
; LENGTH: 1125
; TYPE: DNA
; ORGANISM: Corynebacterium glutamicum
US-09-738-626-3346

Query Match 93.8%; Score 15; DB 10; Length 1125;
Best Local Similarity 100.0%; Pred. No. 93;
Matches 15; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 2 CTCTGGAGCGTTCTC 16
|||||||||||||||
Db 372 CTCTGGAGCGTTCTC 358

RESULT 4
US-09-738-626-1
; Sequence 1, Application US/09738626
; Publication No. US20020197605A1
; GENERAL INFORMATION:
; APPLICANT: NAKAGAWA, SATOSHI
; APPLICANT: MIZOGUCHI, HIROSHI
; APPLICANT: ANDO, SEIKO
; APPLICANT: HAYASHI, MIKIRO
; APPLICANT: OCHIAI, KEIKO
; APPLICANT: YOKOI, HARUHIKO
; APPLICANT: TATEISHI, NAOKO
; APPLICANT: SENOH, AKIHIRO
; APPLICANT: IKEDA, MASATO
; APPLICANT: OZAKI, AKIO
; TITLE OF INVENTION: NOVEL POLYNUCLEOTIDES
; FILE REFERENCE: 249-125
; CURRENT APPLICATION NUMBER: US/09/738,626
; CURRENT FILING DATE: 2000-12-18
; PRIOR APPLICATION NUMBER: JP 99/377484
; PRIOR FILING DATE: 1999-12-16
; PRIOR APPLICATION NUMBER: JP 00/159162
; PRIOR FILING DATE: 2000-04-07
; PRIOR APPLICATION NUMBER: JP 00/280988
; PRIOR FILING DATE: 2000-08-03
; NUMBER OF SEQ ID NOS: 7059
; SOFTWARE: PatentIn ver. 3.0
; SEQ ID NO 1
; LENGTH: 3309400
; TYPE: DNA
; ORGANISM: Corynebacterium glutamicum
US-09-738-626-1

Query Match 93.8%; Score 15; DB 10; Length 3309400;
Best Local Similarity 100.0%; Pred. No. 50;
Matches 15; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 2 CTCTGGAGCGTTCTC 16
|||||||||||||||
Db 3226316 CTCTGGAGCGTTCTC 3226330

RESULT 5
US-10-194-035-7
; Sequence 7, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
; APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
; APPLICANT: SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
; APPLICANT: KLINMAN, Dennis
; APPLICANT: ISHII, Ken
; APPLICANT: VERTHELYI, Daniela
; TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
; FILE REFERENCE: 4239-63317
; CURRENT APPLICATION NUMBER: US/10/194,035
; CURRENT FILING DATE: 2002-07-12
; PRIOR APPLICATION NUMBER: PCT/US01/01122
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: US 60/176,115
; PRIOR FILING DATE: 2000-01-14
; NUMBER OF SEQ ID NOS: 119
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 7
; LENGTH: 16
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-7

Query Match 90.0%; Score 14.4; DB 13; Length 16;
Best Local Similarity 93.8%; Pred. No. 2.7e+02;
Matches 15; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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Qy          1 ACTCTGGAGCGTTCTC 16
              ||||| ||||||||||
Db          1 ACTCTCGAGCGTTCTC 16
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RESULT 6
US-10-068-160-9
; Sequence 9, Application US/10068160
; Publication No. US20030060440A1
; GENERAL INFORMATION:
; APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA, REPRESENTED BY THE
; APPLICANT: SECRETARY, DEPARTMENT OF HEALTH AND HUMAN SERVICES
; APPLICANT: KLINMAN, Dennis
; APPLICANT: ISHII, Ken
; APPLICANT: VERTHELYI, Daniela
; TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
; FILE REFERENCE: 4239-61999
; CURRENT APPLICATION NUMBER: US/10/068,160
; CURRENT FILING DATE: 2002-02-06
; PRIOR APPLICATION NUMBER: 60/128,898
; PRIOR FILING DATE: 1999-04-12
; NUMBER OF SEQ ID NOS: 120
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 9
; LENGTH: 16
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Oligonucleotide
US-10-068-160-9

Query Match 90.0%; Score 14.4; DB 15; Length 16;
Best Local Similarity 93.8%; Pred. No. 2.7e+02;
Matches 15; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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Qy          1 ACTCTGGAGCGTTCTC 16
              ||||| ||||||||||
Db          1 ACTCTCGAGCGTTCTC 16
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RESULT 7
US-10-194-035-14
; Sequence 14, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
; APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
; APPLICANT: SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
; APPLICANT: KLINMAN, Dennis
; APPLICANT: ISHII, Ken
; APPLICANT: VERTHELYI, Daniela
; TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
; FILE REFERENCE: 4239-63317
; CURRENT APPLICATION NUMBER: US/10/194,035
; CURRENT FILING DATE: 2002-07-12
; PRIOR APPLICATION NUMBER: PCT/US01/01122
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: US 60/176,115
; PRIOR FILING DATE: 2000-01-14
; NUMBER OF SEQ ID NOS: 119
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 14
; LENGTH: 17
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-14

Query Match 90.0%; Score 14.4; DB 13; Length 17;
Best Local Similarity 93.8%; Pred. No. 2.7e+02;
Matches 15; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

```
Qy          1 ACTCTGGAGCGTTCTC 16
              ||||| ||||||||||
Db          2 ACTCTCGAGCGTTCTC 17
```

RESULT 8
US-09-888-326-188
; Sequence 188, Application US/09888326
; Publication No. US20030026801A1
; GENERAL INFORMATION:
; APPLICANT: Weiner, George
; APPLICANT: Hartmann, Gunther
; TITLE OF INVENTION: Methods for Enhancing Antibody-Induced
; TITLE OF INVENTION: Cell Lysis and Treating Cancer
; FILE REFERENCE: C1039/7052 (AWS)
; CURRENT APPLICATION NUMBER: US/09/888,326
; CURRENT FILING DATE: 2001-06-22
; PRIOR APPLICATION NUMBER: US 60/213,346
; PRIOR FILING DATE: 2000-06-22
; NUMBER OF SEQ ID NOS: 848
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 188
; LENGTH: 18
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic oligonucleotide
; NAME/KEY: misc_feature
; LOCATION: (0)...(0)
; OTHER INFORMATION: phosphodiester backbone
US-09-888-326-188

Query Match 90.0%; Score 14.4; DB 11; Length 18;
Best Local Similarity 93.8%; Pred. No. 2.7e+02;
Matches 15; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

```
Qy          1 ACTCTGGAGCGTTCTC 16
              ||||| ||||||||||
Db          3 ACTCTCGAGCGTTCTC 18
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RESULT 9
US-09-776-479-724
; Sequence 724, Application US/09776479
; Publication No. US20030087848A1
; GENERAL INFORMATION:
; APPLICANT: Bratzler, Robert L.
; APPLICANT: Petersen, Deanna M.
; APPLICANT: Fouron, Yves
; TITLE OF INVENTION: Immunostimulatory Nucleic Acids for the
; TITLE OF INVENTION: Treatment of Asthma and Allergy
; FILE REFERENCE: C1037/7013 (HCL/MAT)
; CURRENT APPLICATION NUMBER: US/09/776,479
; CURRENT FILING DATE: 2001-02-02
; PRIOR APPLICATION NUMBER: US 60/179,991
; PRIOR FILING DATE: 2000-02-03
; NUMBER OF SEQ ID NOS: 1093
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 724
; LENGTH: 18
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic Sequence
US-09-776-479-724

Query Match 90.0%; Score 14.4; DB 11; Length 18;
Best Local Similarity 93.8%; Pred. No. 2.7e+02;
Matches 15; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

```
Qy          1 ACTCTGGAGCGTTCTC 16
              ||||| ||||||||||
Db          3 ACTCTCGAGCGTTCTC 18
```

RESULT 10
US-10-194-035-11
; Sequence 11, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
; APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
; APPLICANT: SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
; APPLICANT: KLINMAN, Dennis
; APPLICANT: ISHII, Ken
; APPLICANT: VERTHELYI, Daniela
; TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
; FILE REFERENCE: 4239-63317
; CURRENT APPLICATION NUMBER: US/10/194,035
; CURRENT FILING DATE: 2002-07-12
; PRIOR APPLICATION NUMBER: PCT/US01/01122
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: US 60/176,115
; PRIOR FILING DATE: 2000-01-14
; NUMBER OF SEQ ID NOS: 119
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 11
; LENGTH: 18
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-11

```
  Query Match             90.0%;  Score 14.4;  DB 13;  Length 18;
  Best Local Similarity   93.8%;  Pred. No. 2.7e+02;
  Matches   15;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 ACTCTGGAGCGTTCTC 16
              ||||| ||||||||||
Db          3 ACTCTCGAGCGTTCTC 18
```

RESULT 11
US-10-112-653-697
; Sequence 697, Application US/10112653
; Publication No. US20030050268A1
; GENERAL INFORMATION:
; APPLICANT: Krieg, Arthur M.
; APPLICANT: Berg, Daniel J.
; TITLE OF INVENTION: IMMUNOSTIMULATORY NUCLEIC ACID FOR
; TITLE OF INVENTION: TREATMENT OF NON-ALLERGIC INFLAMMATORY DISEASES
; FILE REFERENCE: C01039/70060(AWS)
; CURRENT APPLICATION NUMBER: US/10/112,653
; CURRENT FILING DATE: 2002-03-29
; PRIOR APPLICATION NUMBER: US 60/279,642
; PRIOR FILING DATE: 2001-03-29
; NUMBER OF SEQ ID NOS: 1040
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 697
; LENGTH: 18
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic Oligonucleotide
US-10-112-653-697

```
  Query Match             90.0%;  Score 14.4;  DB 15;  Length 18;
  Best Local Similarity   93.8%;  Pred. No. 2.7e+02;
  Matches   15;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 ACTCTGGAGCGTTCTC 16
              ||||| ||||||||||
Db          3 ACTCTCGAGCGTTCTC 18
```

RESULT 12
US-10-017-995-724
; Sequence 724, Application US/10017995
; Publication No. US20030055014A1
; GENERAL INFORMATION:
; APPLICANT: Bratzler, Robert L.
; TITLE OF INVENTION: Inhibition of Angiogenesis by Nucleic Acids
; FILE REFERENCE: C1037/7025 (HCL/MAT)
; CURRENT APPLICATION NUMBER: US/10/017,995
; CURRENT FILING DATE: 2001-12-18
; PRIOR APPLICATION NUMBER: US 60/255,534
; PRIOR FILING DATE: 2000-12-14
; NUMBER OF SEQ ID NOS: 1093
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 724
; LENGTH: 18
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic Sequence
US-10-017-995-724

```
  Query Match             90.0%;  Score 14.4;  DB 15;  Length 18;
  Best Local Similarity   93.8%;  Pred. No. 2.7e+02;
  Matches   15;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 ACTCTGGAGCGTTCTC 16
              ||||| ||||||||||
Db          3 ACTCTCGAGCGTTCTC 18
```

RESULT 13
US-10-194-035-5
; Sequence 5, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
; APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
; APPLICANT: SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
; APPLICANT: KLINMAN, Dennis
; APPLICANT: ISHII, Ken
; APPLICANT: VERTHELYI, Daniela
; TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
; FILE REFERENCE: 4239-63317
; CURRENT APPLICATION NUMBER: US/10/194,035
; CURRENT FILING DATE: 2002-07-12
; PRIOR APPLICATION NUMBER: PCT/US01/01122
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: US 60/176,115
; PRIOR FILING DATE: 2000-01-14
; NUMBER OF SEQ ID NOS: 119
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 5
; LENGTH: 19
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-5

```
  Query Match             90.0%;  Score 14.4;  DB 13;  Length 19;
  Best Local Similarity   93.8%;  Pred. No. 2.7e+02;
  Matches   15;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 ACTCTGGAGCGTTCTC 16
              ||||| ||||||||||
Db          4 ACTCTCGAGCGTTCTC 19
```

RESULT 14
US-10-068-160-8
; Sequence 8, Application US/10068160

```
; Publication No. US20030060440A1
; GENERAL INFORMATION:
;  APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA, REPRESENTED BY THE
;  APPLICANT:  SECRETARY, DEPARTMENT OF HEALTH AND HUMAN SERVICES
;  APPLICANT:  KLINMAN, Dennis
;  APPLICANT:  ISHII, Ken
;  APPLICANT:  VERTHELYI, Daniela
;  TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
;  FILE REFERENCE: 4239-61999
;  CURRENT APPLICATION NUMBER: US/10/068,160
;  CURRENT FILING DATE:  2002-02-06
;  PRIOR APPLICATION NUMBER: 60/128,898
;  PRIOR FILING DATE: 1999-04-12
;  NUMBER OF SEQ ID NOS: 120
;  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 8
;   LENGTH: 19
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Oligonucleotide
US-10-068-160-8

  Query Match             90.0%;  Score 14.4;  DB 15;  Length 19;
  Best Local Similarity   93.8%;  Pred. No. 2.7e+02;
  Matches   15;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 ACTCTGGAGCGTTCTC 16
              ||||| ||||||||||
Db          4 ACTCTCGAGCGTTCTC 19


RESULT 15
US-09-824-468-7
; Sequence 7, Application US/09824468
; Patent No. US20020064515A1
; GENERAL INFORMATION:
;  APPLICANT: Krieg, Arthur M.
;  APPLICANT:  Weiner, George
;  TITLE OF INVENTION: Methods and Products for Stimulating the
;  TITLE OF INVENTION:  Immune System Using Immunotherapeutic Oligonucleotides and
;  TITLE OF INVENTION:  Cytokines
;  FILE REFERENCE: C1039/7026/HCL
;  CURRENT APPLICATION NUMBER: US/09/824,468
;  CURRENT FILING DATE:  2001-04-02
;  PRIOR APPLICATION NUMBER: 09/286,098
;  PRIOR FILING DATE: 1999-04-02
;  NUMBER OF SEQ ID NOS: 105
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 7
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic Sequence
US-09-824-468-7

  Query Match             90.0%;  Score 14.4;  DB 9;  Length 20;
  Best Local Similarity   93.8%;  Pred. No. 2.7e+02;
  Matches   15;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 ACTCTGGAGCGTTCTC 16
              ||||| ||||||||||
Db          5 ACTCTCGAGCGTTCTC 20


Search completed: January 20, 2004, 17:24:40
Job time : 110.882 secs
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GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: January 20, 2004, 16:34:44 ; Search time 1024.47 Seconds
(without alignments)
379.583 Million cell updates/sec

Title: US-10-068-160-73
Perfect score: 16
Sequence: 1 actctggagcgttctc 16

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 22781392 seqs, 12152238056 residues

Total number of hits satisfying chosen parameters: 45562784

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : EST:*
1: em_estba:*
2: em_esthum:*
3: em_estin:*
4: em_estmu:*
5: em_estov:*
6: em_estpl:*
7: em_estro:*
8: em_htc:*
9: gb_est1:*
10: gb_est2:*
11: gb_htc:*
12: gb_est3:*
13: gb_est4:*
14: gb_est5:*
15: em_estfun:*
16: em_estom:*
17: em_gss_hum:*
18: em_gss_inv:*
19: em_gss_pln:*
20: em_gss_vrt:*
21: em_gss_fun:*
22: em_gss_mam:*
23: em_gss_mus:*
24: em_gss_pro:*
25: em_gss_rod:*
26: em_gss_phg:*
27: em_gss_vrl:*
28: gb_gss1:*
29: gb_gss2:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
c 1	16	100.0	948	10	BE972956	BE972956 601651808
2	15	93.8	199	14	CA778499	CA778499 MPL384_9_
3	15	93.8	428	9	AI401438	AI401438 tg64a08.x
c 4	15	93.8	445	28	AQ472178	AQ472178 CITBI-E1-
5	15	93.8	480	28	AQ526058	AQ526058 HS_5309_B
6	15	93.8	495	28	AZ141640	AZ141640 SP_0045_A
7	15	93.8	508	9	AW367384	AW367384 MR0-HT016
8	15	93.8	521	14	CD205752	CD205752 HS1_18_E0
9	15	93.8	544	28	AF005835	AF005835 AF005835
c 10	15	93.8	555	10	BE013283	BE013283 123182 MA
c 11	15	93.8	555	12	BI344753	BI344753 373312 MA
c 12	15	93.8	561	12	BI344749	BI344749 373307 MA
13	15	93.8	640	28	BH501762	BH501762 BOHFO59TF
c 14	15	93.8	654	13	BU106109	BU106109 603005752
15	15	93.8	698	29	BZ805477	BZ805477 PUFHH39TD
c 16	15	93.8	699	29	BZ805475	BZ805475 PUFHH39TB
c 17	15	93.8	703	28	BZ005611	BZ005611 oek65f04.
18	15	93.8	944	13	BQ652192	BQ652192 AGENCOURT
c 19	15	93.8	947	10	BG169117	BG169117 602320566
20	15	93.8	1031	13	BQ921588	BQ921588 AGENCOURT
c 21	15	93.8	1090	10	BE389805	BE389805 601282995
22	14.4	90.0	117	13	BQ311300	BQ311300 PM4-BN006
c 23	14.4	90.0	152	28	B81058	B81058 CIT-HSP-206
24	14.4	90.0	173	9	AT002309	AT002309 AT002309
25	14.4	90.0	222	13	BU993490	BU993490 HD13L13r
26	14.4	90.0	265	14	CB884492	CB884492 Ma1072 Ha
c 27	14.4	90.0	287	10	BF561461	BF561461 UI-R-C0-h
28	14.4	90.0	291	9	AU257096	AU257096 AU257096
29	14.4	90.0	293	9	AL840593	AL840593 AL840593
c 30	14.4	90.0	304	14	CA748391	CA748391 NS_EST_34
31	14.4	90.0	321	14	CD345249	CD345249 EtESTef87
32	14.4	90.0	322	14	D59115	D59115 HUM522B03B
33	14.4	90.0	345	13	BY106539	BY106539 BY106539
c 34	14.4	90.0	348	14	N22914	N22914 yx66g01.s1
35	14.4	90.0	361	28	AZ260811	AZ260811 RPCI-23-1
c 36	14.4	90.0	366	13	BQ791558	BQ791558 E3220 Chi
37	14.4	90.0	376	28	BH362657	BH362657 CH230-48C
c 38	14.4	90.0	380	9	AI478296	AI478296 tm44h09.x
39	14.4	90.0	380	9	AL841666	AL841666 AL841666
c 40	14.4	90.0	407	13	BY691081	BY691081 BY691081
c 41	14.4	90.0	407	14	CB771429	CB771429 AMGNNUC:T
c 42	14.4	90.0	428	14	CB794310	CB794310 AMGNNUC:T
c 43	14.4	90.0	437	10	BG544490	BG544490 E2376 Chi
c 44	14.4	90.0	438	14	W62184	W62184 md87g07.r1
c 45	14.4	90.0	443	9	AA063658	AA063658 ESTM186F

ALIGNMENTS

RESULT 1
BE972956/c
LOCUS BE972956 948 bp mRNA linear EST 04-OCT-2000
DEFINITION 601651808R2 NIH_MGC_82 Homo sapiens cDNA clone IMAGE:3935448 3', mRNA sequence.
ACCESSION BE972956
VERSION BE972956.1 GI:10586292
KEYWORDS EST.
SOURCE Homo sapiens (human)
ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE 1 (bases 1 to 948)
AUTHORS NIH-MGC http://mgc.nci.nih.gov/.
TITLE National Institutes of Health, Mammalian Gene Collection (MGC)
JOURNAL Unpublished
COMMENT Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: CLONETECH Laboratories, Inc.
cDNA Library Preparation: CLONETECH Laboratories, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLCM777 row: o column: 01.
FEATURES Location/Qualifiers

```
     source          1. .948
                     /organism="Homo sapiens"
                     /mol_type="mRNA"
                     /db_xref="taxon:9606"
                     /clone="IMAGE:3935448"
                     /lab_host="DH10B (T1 phage-resistant)"
                     /clone_lib="NIH_MGC_82"
                     /note="Organ: testis; Vector: pDNR-LIB (Clontech); Site_1:
                     SfiI (ggccgcctcggcc); Site_2: SfiI (ggccattatggcc); 5' and
                     3' adaptors were used in cloning as follows: 5' adaptor
                     sequence:  5'-CACGGCCATTATGGCC-3' and 3' adaptor sequence:
                     5'-ATTCTAGAGGCCGAGGCGGCCGACATG-dT(30)BN-3' (where B = A,
                     C, or G and N = A, C,  G, or T).   Average insert size
                     1.35 kb (range 0.9-4.0 kb).  14/15 colonies contained
                     inserts by PCR. This library was enriched for full-length
                     clones and was constructed by Clontech  Laboratories (Palo
                     Alto, CA)."
BASE COUNT      218 a    205 c    270 g    253 t      2 others
ORIGIN

  Query Match             100.0%;  Score 16;  DB 10;  Length 948;
  Best Local Similarity   100.0%;  Pred. No. 9.5e+02;
  Matches   16;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 ACTCTGGAGCGTTCTC 16
              ||||||||||||||||
Db        711 ACTCTGGAGCGTTCTC 696


RESULT 2
CA778499
LOCUS       CA778499                199 bp    mRNA    linear   EST 03-DEC-2002
DEFINITION  MPL384_9_H02 MPL Sus scrofa cDNA clone pSPORT1 5', mRNA sequence.
ACCESSION   CA778499
VERSION     CA778499.1  GI:26016374
KEYWORDS    EST.
SOURCE      Sus scrofa (pig)
  ORGANISM  Sus scrofa
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
REFERENCE   1  (bases 1 to 199)
  AUTHORS   Center for Animal Functional Genomics.
  TITLE     Generation of ESTs from mixed pig cDNA libraries
  JOURNAL   Unpublished
COMMENT     Contact: Steven P. Suchyta
            Center for Animal Functional Genomics, Department of Animal Science
            Michigan State University
            B215 Anthony Hall, East Lansing, MI 48824, USA
            Tel: 517 355 8443
            Fax: 517 432 9168
            Email: suchytas@msu.edu
            Single Pass sequencing. Bases called and alt-trimmed with phred
            v0.0204425.c. Vector identified by cross_match with the -minscore
            20 -minmatch 12 options.
            Seq primer: T7.
FEATURES             Location/Qualifiers
     source          1. .199
                     /organism="Sus scrofa"
                     /mol_type="mRNA"
                     /db_xref="taxon:9823"
                     /clone="pSPORT1"
                     /sex="Male and female"
                     /tissue_type="pooled"
                     /dev_stage="pooled"
                     /lab_host="DH10B"
                     /clone_lib="MPL"
                     /note="Organ: pooled; Vector: pSPORT1; Site_1: NotI;
                     Site_2: SalI; Library made from pooled tissue from adipose
                     , adrenal gland, blood leukocytes, brain, cartilage, eye,
                     heart, intestine, kidney, liver, lung lymph nodes, mammary
                     gland, myogenic satellite cells, ovary, pancreas,
                     pituitary gland, placenta, skin, spinal cord, spleen,
                     stomach, tendon, testes, uterus, and vascular from various
                     developmental and physiological stages."
BASE COUNT       34 a     55 c     64 g     46 t
ORIGIN

  Query Match             93.8%;  Score 15;  DB 14;  Length 199;
  Best Local Similarity   100.0%;  Pred. No. 2.2e+03;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 ACTCTGGAGCGTTCT 15
              |||||||||||||||
Db         69 ACTCTGGAGCGTTCT 83


RESULT 3
AI401438
LOCUS       AI401438                428 bp    mRNA    linear   EST 30-MAR-1999
DEFINITION  tg64a08.x1 Soares_NhHMPu_S1 Homo sapiens cDNA clone IMAGE:2113526
            3', mRNA sequence.
ACCESSION   AI401438
VERSION     AI401438.1  GI:4244525
KEYWORDS    EST.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 428)
  AUTHORS   NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
  TITLE     National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
            Tumor Gene Index
  JOURNAL   Unpublished
COMMENT     Contact: Robert Strausberg, Ph.D.
            Email: cgapbs-r@mail.nih.gov
            This clone is available royalty-free through LLNL ; contact the
            IMAGE Consortium (info@image.llnl.gov) for further information.
            Insert Length: 1814  Std Error: 0.00
            Seq primer: -40UP from Gibco
            High quality sequence stop: 420.
FEATURES             Location/Qualifiers
     source          1. .428
                     /organism="Homo sapiens"
                     /mol_type="mRNA"
                     /db_xref="taxon:9606"
                     /clone="IMAGE:2113526"
                     /tissue_type="Pooled human melanocyte, fetal heart, and
                     pregnant uterus"
                     /lab_host="DH10B"
                     /clone_lib="Soares_NhHMPu_S1"
                     /note="Organ: mixed (see below); Vector: pT7T3D-Pac
                     (Pharmacia) with a modified polylinker; Site_1: Not I;
                     Site_2: Eco RI; Equal amounts of plasmid DNA from three
                     normalized libraries (melanocyte 2NbHM, pregnant uterus
                     NbHPU, and fetal heart NbHH19W) were mixed, and ss circles
                     were made in vitro. Following HAP purification, this DNA
                     was used as tracer in a subtractive hybridization
                     reaction. The driver was PCR-amplified cDNAs from pools of
                     5,000 clones made from the same 3 libraries. The pools
                     consisted of I.M.A.G.E. clones 260232-265223,
                     340488-345479, and 484488-489479."
BASE COUNT       72 a    138 c    144 g     74 t
ORIGIN

  Query Match             93.8%;  Score 15;  DB 9;  Length 428;
  Best Local Similarity   100.0%;  Pred. No. 2.6e+03;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 CTCTGGAGCGTTCTC 16
              |||||||||||||||
Db        338 CTCTGGAGCGTTCTC 352


RESULT 4
AQ472178/c
LOCUS       AQ472178                445 bp    DNA     linear   GSS 23-APR-1999
```

```
DEFINITION  CITBI-E1-2589E3.TR CITBI-E1 Homo sapiens genomic clone 2589E3,
            genomic survey sequence.
ACCESSION   AQ472178
VERSION     AQ472178.1  GI:4655832
KEYWORDS    GSS.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 445)
  AUTHORS   Zhao,S., Adams,M.D., Nierman,W., Malek,J., Shizuya,H., Simon,M. and
            Venter,J.C.
  TITLE     Use of BAC End Sequences from CalTech Libraries for Sequence-Ready
            Map Building
  JOURNAL   Unpublished
COMMENT     Contact: Shaying Zhao, William Nierman, Mark Adams
            Department of Eukaryotic Genomics
            The Institute for Genomic Research
            9712 Medical Center Dr., Rockville, MD 20850
            Tel: 301 838 0200
            Fax: 301 838 0208
            Email: hbe@tigr.org
            Clones are available from Research Genetics (info@resgen.com). BAC
            end search page:
            http://www.tigr.org/tdb/humgen/bac_end_search/bac_end_search.html.
            Seq primer: M13 Reverse
            Class: BAC ends.
FEATURES             Location/Qualifiers
     source          1. .445
                     /organism="Homo sapiens"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:9606"
                     /clone="2589E3"
                     /sex="male"
                     /cell_type="sperm"
                     /clone_lib="CITBI-E1"
                     /note="Vector: pBeloBAC11; Site_1: EcoRI; Site_2: EcoRI;
                     CalTech Human BAC Library D"
BASE COUNT      137 a     83 c    118 g    107 t
ORIGIN

  Query Match            93.8%;  Score 15;  DB 28;  Length 445;
  Best Local Similarity  100.0%;  Pred. No. 2.6e+03;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 CTCTGGAGCGTTCTC 16
              ||||||||||||||||
Db        182 CTCTGGAGCGTTCTC 168


RESULT 5
AQ526058
LOCUS       AQ526058                480 bp    DNA     linear   GSS 11-MAY-1999
DEFINITION  HS_5309_B1_A12_T7A RPCI-11 Human Male BAC Library Homo sapiens
            genomic clone Plate=885 Col=23 Row=B, genomic survey sequence.
ACCESSION   AQ526058
VERSION     AQ526058.1  GI:4773378
KEYWORDS    GSS.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 480)
  AUTHORS   Mahairas,G.G., Wallace,J.C., Smith,K., Swartzell,S., Holzman,T.,
            Keller,A., Shaker,R., Furlong,J., Young,J., Zhao,S., Adams,M.D. and
            Hood,L.
  TITLE     Sequence-tagged connectors: A sequence approach to mapping and
            scanning the human genome
  JOURNAL   Proc. Natl. Acad. Sci. U.S.A. 96 (17), 9739-9744 (1999)
  MEDLINE   99380589
   PUBMED   10449764
COMMENT     Contact: Mahairas GG, Wallace JC, Hood L
            High Throughput Sequencing Center
            University of Washington
            401 Queen Anne Avenue North, Seattle, WA 98109, USA
            Tel: (206) 616-3618
            Fax: (206) 616-3887
            Email: jwallace@u.washington.edu
            Clones are derived from the human BAC library RPCI-11. For BAC
            library availability, please contact Pieter de Jong
            (pieter@dejong.med.buffalo.edu). Clones may be purchased from
            BACPAC Resources (http://bacpac.med.buffalo.edu/ordering_bac.htm)
            or from Resear h Genetics (info@resgen.com). BAC end Web Server:
            http://www.htsc.washington.edu
            Plate: 885  row: B  column: 23
            Seq primer: T7
            Class: BAC ends
            High quality sequence stop: 480.
FEATURES             Location/Qualifiers
     source          1. .480
                     /organism="Homo sapiens"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:9606"
                     /clone="Plate=885 Col=23 Row=B"
                     /sex="male"
                     /clone_lib="RPCI-11 Human Male BAC Library"
                     /note="Vector: pBACe3.6; Site_1: EcoRI; Site_2: EcoRI;
                     Male blood DNA was isolated from one randomly chosen donor
                     and partially digested with a combination of EcoRI and
                     EcoRI Methylase. Size selected DNA was cloned into the
                     pBACe3.6 vector at EcoRI sites"
BASE COUNT      118 a    116 c     95 g    149 t      2 others
ORIGIN

  Query Match            93.8%;  Score 15;  DB 28;  Length 480;
  Best Local Similarity  100.0%;  Pred. No. 2.7e+03;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 CTCTGGAGCGTTCTC 16
              ||||||||||||||||
Db         68 CTCTGGAGCGTTCTC 82


RESULT 6
AZ141640
LOCUS       AZ141640                495 bp    DNA     linear   GSS 28-AUG-2000
DEFINITION  SP_0045_A1_C04_SP6E Strongylocentrotus purpuratus, purple sea
            urchin, sperm genomic BAC library Strongylocentrotus purpuratus
            genomic clone Plate=45 Col=7 Row=E, genomic survey sequence.
ACCESSION   AZ141640
VERSION     AZ141640.1  GI:8293543
KEYWORDS    GSS.
SOURCE      Strongylocentrotus purpuratus
  ORGANISM  Strongylocentrotus purpuratus
            Eukaryota; Metazoa; Echinodermata; Eleutherozoa; Echinozoa;
            Echinoidea; Euechinoidea; Echinacea; Echinoida;
            Strongylocentrotidae; Strongylocentrotus.
REFERENCE   1  (bases 1 to 495)
  AUTHORS   Cameron,R.A., Mahairas,G., Rast,J.P., Martinez,P., Biondi,T.R.,
            Swartzell,S., Wallace,J.C., Poustka,A.J., Livingston,B.T., Wray
            ,G.A., Ettensohn,C.A., Lehrach,H., Britten,R.J, Davidson,E.H. and
            Hood,L.
  TITLE     A sea urchin genome project: Sequence scan, virtual map, and
            additional resources
  JOURNAL   Proc. Natl. Acad. Sci. U.S.A. 97 (17), 9514-9518 (2000)
  MEDLINE   20402566
   PUBMED   10920195
COMMENT     Contact: Cameron, RA, Davidson, EH, Hood, L
            Division of Biology 156-29
            California Institute of Technology
            Pasadena California 91125, USA
            Tel: (626) 395-8421
            Fax: (626) 793-3047
            Email: acameron@caltech.edu
            Plate: 45  row: E  column: 7
            Seq primer: SP6
```

```
          Class: BAC ends
          High quality sequence stop: 495.
FEATURES             Location/Qualifiers
     source          1. .495
                     /organism="Strongylocentrotus purpuratus"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:7668"
                     /clone="Plate=45 Col=7 Row=E"
                     /clone_lib="Strongylocentrotus purpuratus, purple sea
                     urchin, sperm genomic BAC library"
                     /note="Organ: sperm; Vector: BACe3.6; BAC Clones in E-Coli
                     DH10B"
BASE COUNT      114 a    132 c     96 g    146 t      7 others
ORIGIN

  Query Match             93.8%;  Score 15;  DB 28;  Length 495;
  Best Local Similarity   100.0%;  Pred. No. 2.7e+03;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 CTCTGGAGCGTTCTC 16
              ||||||||||||||||
Db        311 CTCTGGAGCGTTCTC 325


RESULT 7
AW367384
LOCUS       AW367384                508 bp    mRNA    linear   EST 04-FEB-2000
DEFINITION  MR0-HT0164-191099-002-a04 HT0164 Homo sapiens cDNA, mRNA sequence.
ACCESSION   AW367384
VERSION     AW367384.1  GI:6872034
KEYWORDS    EST.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 508)
  AUTHORS   HCGP http://www.ludwig.org.br/ORESTES.
  TITLE     The FAPESP/LICR Human Cancer Genome Project
  JOURNAL   Unpublished
COMMENT     Contact: Simpson A.J.G.
            Laboratory of Cancer Genetics
            Ludwig Institute for Cancer Research
            Rua Prof. Antonio Prudente 109, 4 andar, 01509-010, Sao Paulo-SP,
            Brazil
            Tel: +55-11-2704922
            Fax: +55-11-2707001
            Email: asimpson@ludwig.org.br
            This sequence was derived from the FAPESP/LICR Human Cancer Genome
            Project. This entry can be seen in the following URL
            (http://www.ludwig.org.br/scripts/gethtml2.pl?t1=MR0&t2=MR0-HT0164-
            191099-002-a04&t3=1999-10-19&t4=1)
            Seq primer: puc 18 forward
            High quality sequence start: 8
            High quality sequence stop: 507.
FEATURES             Location/Qualifiers
     source          1. .508
                     /organism="Homo sapiens"
                     /mol_type="mRNA"
                     /db_xref="taxon:9606"
                     /dev_stage="Adult"
                     /clone_lib="HT0164"
                     /note="Organ: head_neck; Vector: puc18; Site_1: SmaI;
                     Site_2: SmaI; A mini-library was made by cloning products
                     derived from  ORESTES PCR (U.S. Letters Patent application
                     No. 196,716 -  Ludwig Institute for Cancer Research)
                     profiles into  the pUC 18 vector. Reverse transcription of
                     tissue mRNA and cDNA amplification were performed under
                     low stringency conditions."
BASE COUNT      119 a    116 c    157 g    115 t      1 others
ORIGIN

  Query Match             93.8%;  Score 15;  DB 9;  Length 508;
  Best Local Similarity   100.0%;  Pred. No. 2.7e+03;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 CTCTGGAGCGTTCTC 16
              ||||||||||||||||
Db         31 CTCTGGAGCGTTCTC 45


RESULT 8
CD205752
LOCUS       CD205752                521 bp    mRNA    linear   EST 20-MAY-2003
DEFINITION  HS1_18_E02.b1_A012 Heat-shocked seedlings Sorghum bicolor cDNA
            clone HS1_18_E02_A012 3', mRNA sequence.
ACCESSION   CD205752
VERSION     CD205752.1  GI:30936132
KEYWORDS    EST.
SOURCE      Sorghum bicolor (sorghum)
  ORGANISM  Sorghum bicolor
            Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
            Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACCAD
            clade; Panicoideae; Andropogoneae; Sorghum.
REFERENCE   1  (bases 1 to 521)
  AUTHORS   Cordonnier-Pratt,M.-M., Wentzel,V., Suzuki,Y., Sugano,S., Klein
            ,R.R., Liang,C., Sun,F., Sullivan,R., Shah,M., Buchanan,C.D.,
            Eastman,A. and Pratt,L.H.
  TITLE     An EST database from Sorghum: heat-shocked seedlings
  JOURNAL   Unpublished
COMMENT     Other_ESTs: HS1_18_E02.g1_A012
            Contact: Cordonnier-Pratt MM
            Laboratory for Genomics and Bioinformatics
            The University of Georgia, Department of Plant Biology
            Plant Sciences Building, Rm. 2502, Athens, GA 30602-7271, USA
            Tel: 706 542 1860
            Fax: 706 583 0210
            Email: mmpratt@uga.edu
            Library constructed by Dr. Yutaka Suzuki and Dr. Sumio Sugano in
            the Human Genome Center, University of Tokyo Institute of Medical
            Science; plant material and RNA prepared at Texas A & M University;
            sequencing done in the Laboratory for Genomics and Bioinformatics,
            University of Georgia. Sequence ends have been trimmed to exclude
            vector and regions below Phred quality 16. Three-prime sequences
            are presented as their reverse complement and have been trimmed to
            exclude polyA.
            Seq primer: Sug3 (CGACCTGCAGCTCGAGCACA)
            POLYA=Yes.
FEATURES             Location/Qualifiers
     source          1. .521
                     /organism="Sorghum bicolor"
                     /mol_type="mRNA"
                     /cultivar="IS3620C"
                     /db_xref="taxon:4558"
                     /clone="HS1_18_E02_A012"
                     /lab_host="DH10B-T1 phage-resistant E. coli"
                     /clone_lib="Heat-shocked seedlings"
                     /note="Vector: pME18S-FL3; Site_1: XhoI; Site_2: XhoI; The
                     library was prepared from polyA+ RNA from 6-day-old
                     seedlings grown in hydroponic culture and heat-shocked at
                     40-42 C for 4 or 24 hr. After heat shock, roots and leaves
                     were harvested and tissues combined for RNA isolation.
                     Double-stranded cDNA was cloned unidirectionally into
                     different DraIII sites of the pME18S-FL3 vector (5-prime
                     DraIII site is CACTGTGTG, 3-prime DraIII site is CACCATGTG
                     )."
BASE COUNT      123 a    124 c    152 g    122 t
ORIGIN

  Query Match             93.8%;  Score 15;  DB 14;  Length 521;
  Best Local Similarity   100.0%;  Pred. No. 2.7e+03;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 CTCTGGAGCGTTCTC 16
              ||||||||||||||||
Db        335 CTCTGGAGCGTTCTC 349
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RESULT 9
AF005835
LOCUS       AF005835                544 bp    DNA     linear   GSS 06-NOV-2000
DEFINITION  AF005835 Arabidopsis thaliana 332-2 Arabidopsis thaliana genomic
            clone 3322e1 similar to A. thaliana cyclin 3b mRNA with GenBank
            Accession Number Z31402, genomic survey sequence.
ACCESSION   AF005835
VERSION     AF005835.1  GI:3387759
KEYWORDS    GSS.
SOURCE      Arabidopsis thaliana (thale cress)
  ORGANISM  Arabidopsis thaliana
            Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
            Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; rosids
            ; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
REFERENCE   1  (bases 1 to 544)
  AUTHORS   Mathur,J., Szabados,L., Schaefer,S., Grunenberg,B., Lossow,A.,
            Jonas-Straube,E., Schell,J., Koncz,C. and Koncz-Kalman,Z.
  TITLE     Gene identification with sequenced T-DNA tags generated by
            transformation of Arabidopsis cell suspension
  JOURNAL   Plant J. 13 (5), 707-716 (1998)
  MEDLINE   98345991
   PUBMED   9681013
COMMENT     Contact: Koncz C
            Abteilung Genetische Grundlagen der Pflanzenzuechtung
            Max-Planck Institut fuer Zuechtungsforschung
            Carl von Linne weg 10, Cologne, D-50829, Germany
            Email: koncz@mpiz-koeln.mpg.de
            transgenic cell line was obtained by transformation with the T-DNA
            of pPCV6NFHyg Agrobacterium binary vector; the left border junction
            of T-DNA insertion 3322e1 was isolated in E. coli after EcoRI
            digestion and self-circularization of plant DNA; clone 3322e1
            carries a plant DNA fragment of 6.4 kb that extends from an EcoRI
            site to the left-border junction of pPCV6NFHyg T-DNA tag; sequences
            of the left T-DNA border are excluded from the submission
            Class: transposon-tagged.
FEATURES             Location/Qualifiers
     source          1. .544
                     /organism="Arabidopsis thaliana"
                     /mol_type="genomic DNA"
                     /cultivar="Col-1"
                     /db_xref="taxon:3702"
                     /clone="3322e1"
                     /cell_line="332-2"
                     /clone_lib="Arabidopsis thaliana 332-2"
BASE COUNT      127 a    130 c     77 g    210 t
ORIGIN

  Query Match            93.8%;  Score 15;  DB 28;  Length 544;
  Best Local Similarity  100.0%;  Pred. No. 2.7e+03;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 CTCTGGAGCGTTCTC 16
              ||||||||||||||||
Db        236 CTCTGGAGCGTTCTC 250


RESULT 10
BE013283/c
LOCUS       BE013283                555 bp    mRNA    linear   EST 09-JUL-2000
DEFINITION  123182 MARC 1PIG Sus scrofa cDNA 5', mRNA sequence.
ACCESSION   BE013283
VERSION     BE013283.1  GI:8274246
KEYWORDS    EST.
SOURCE      Sus scrofa (pig)
  ORGANISM  Sus scrofa
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
REFERENCE   1  (bases 1 to 555)
  AUTHORS   Fahrenkrug,S.C., Smith,T.P.L., Freking,B.A., Cho,J., White,J.,
            Vallet,J., Wise,T., Rohrer,G.A., Pertea,G., Sultana,R., Quackenbush
            ,J. and Keele,J.W.
  TITLE     Porcine gene discovery by normalized cDNA-library sequencing and
            EST cluster assembly
  JOURNAL   Mamm. Genome 13 (8), 475-478 (2002)
  MEDLINE   22213789
   PUBMED   12226715
COMMENT     Contact: Smith TPL
            USDA, ARS, US Meat Animal Research Center
            PO Box 166, Clay Center, NE 68933-0166, USA
            Tel: 402 762 4366
            Fax: 402 762 4390
            Email: smith@email.marc.usda.gov
            Single pass sequencing. Bases called and alt_trimmed with phred
            v0.980904.e. Vector identified by cross_match with the -minscore 18
            and -minmatch 12 options.
            PCR PRimers
            FORWARD: AGGAAACAGCTATGACCAT
            BACKWARD: GTTTTCCCAGTCACGACG
            Plate: 50  row: D  column: 17
            Seq primer: ATTTAGGTGACACTATAG.
FEATURES             Location/Qualifiers
     source          1. .555
                     /organism="Sus scrofa"
                     /mol_type="mRNA"
                     /db_xref="taxon:9823"
                     /tissue_type="pooled"
                     /lab_host="DH10B"
                     /clone_lib="MARC 1PIG"
                     /note="Vector: pCMV SPORT6; Site_1: NotI; Site_2: SalI;
                     Library made from pooled tissue from day 11, 13, 15, 20,
                     and 30 embryos."
BASE COUNT      135 a    173 c    152 g     95 t
ORIGIN

  Query Match            93.8%;  Score 15;  DB 10;  Length 555;
  Best Local Similarity  100.0%;  Pred. No. 2.7e+03;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 CTCTGGAGCGTTCTC 16
              ||||||||||||||||
Db        548 CTCTGGAGCGTTCTC 534


RESULT 11
BI344753/c
LOCUS       BI344753                555 bp    mRNA    linear   EST 30-JUL-2001
DEFINITION  373312 MARC 2PIG Sus scrofa cDNA 5', mRNA sequence.
ACCESSION   BI344753
VERSION     BI344753.1  GI:15038042
KEYWORDS    EST.
SOURCE      Sus scrofa (pig)
  ORGANISM  Sus scrofa
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
REFERENCE   1  (bases 1 to 555)
  AUTHORS   Fahrenkrug,S.C., Smith,T.P.L., Freking,B.A., Cho,J., White,J.,
            Vallet,J., Wise,T., Rohrer,G.A., Pertea,G., Sultana,R., Quackenbush
            ,J. and Keele,J.W.
  TITLE     Porcine gene discovery by normalized cDNA-library sequencing and
            EST cluster assembly
  JOURNAL   Mamm. Genome 13 (8), 475-478 (2002)
  MEDLINE   22213789
   PUBMED   12226715
COMMENT     Contact: Smith TPL
            USDA, ARS, US Meat Animal Research Center
            PO Box 166, Clay Center, NE 68933-0166, USA
            Tel: 402 762 4366
            Fax: 402 762 4390
            Email: smith@email.marc.usda.gov
            Single pass sequencing. Bases called and alt_trimmed with phred
            v0.980904.e. Vector identified by cross_match with the -minscore 18
            and -minmatch 12 options.
            PCR PRimers
            FORWARD: AGGAAACAGCTATGACCAT
            BACKWARD: GTTTTCCCAGTCACGACG
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```
            Plate: 120  row: L  column: 3
            Seq primer: ATTTAGGTGACACTATAG.
FEATURES              Location/Qualifiers
     source           1. .555
                      /organism="Sus scrofa"
                      /mol_type="mRNA"
                      /db_xref="taxon:9823"
                      /tissue_type="pooled"
                      /lab_host="DH10B"
                      /clone_lib="MARC 2PIG"
                      /note="Vector: pCMV SPORT6; Site_1: NotI; Site_2: SalI;
                      Library made from pooled tissue from testis, ovary,
                      endometrium, hypothalamus, pituitary, and placenta."
BASE COUNT      142 a    167 c    134 g    110 t      2 others
ORIGIN

  Query Match             93.8%;  Score 15;  DB 12;  Length 555;
  Best Local Similarity   100.0%;  Pred. No. 2.7e+03;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 CTCTGGAGCGTTCTC 16
              ||||||||||||||||
Db        409 CTCTGGAGCGTTCTC 395


RESULT 12
BI344749/c
LOCUS       BI344749                561 bp    mRNA    linear   EST 30-JUL-2001
DEFINITION  373307 MARC 2PIG Sus scrofa cDNA 5', mRNA sequence.
ACCESSION   BI344749
VERSION     BI344749.1  GI:15038038
KEYWORDS    EST.
SOURCE      Sus scrofa (pig)
  ORGANISM  Sus scrofa
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
REFERENCE   1  (bases 1 to 561)
  AUTHORS   Fahrenkrug,S.C., Smith,T.P.L., Freking,B.A., Cho,J., White,J.,
            Vallet,J., Wise,T., Rohrer,G.A., Pertea,G., Sultana,R., Quackenbush
            ,J. and Keele,J.W.
  TITLE     Porcine gene discovery by normalized cDNA-library sequencing and
            EST cluster assembly
  JOURNAL   Mamm. Genome 13 (8), 475-478 (2002)
  MEDLINE   22213789
   PUBMED   12226715
COMMENT     Contact: Smith TPL
            USDA, ARS, US Meat Animal Research Center
            PO Box 166, Clay Center, NE 68933-0166, USA
            Tel: 402 762 4366
            Fax: 402 762 4390
            Email: smith@email.marc.usda.gov
            Single pass sequencing. Bases called and alt_trimmed with phred
            v0.980904.e. Vector identified by cross_match with the -minscore 18
            and -minmatch 12 options.
            PCR PRimers
            FORWARD: AGGAAACAGCTATGACCAT
            BACKWARD: GTTTTCCCAGTCACGACG
            Plate: 120  row: K  column: 4
            Seq primer: ATTTAGGTGACACTATAG.
FEATURES              Location/Qualifiers
     source           1. .561
                      /organism="Sus scrofa"
                      /mol_type="mRNA"
                      /db_xref="taxon:9823"
                      /tissue_type="pooled"
                      /lab_host="DH10B"
                      /clone_lib="MARC 2PIG"
                      /note="Vector: pCMV SPORT6; Site_1: NotI; Site_2: SalI;
                      Library made from pooled tissue from testis, ovary,
                      endometrium, hypothalamus, pituitary, and placenta."
BASE COUNT      124 a    184 c    160 g     93 t
ORIGIN

  Query Match             93.8%;  Score 15;  DB 12;  Length 561;
  Best Local Similarity   100.0%;  Pred. No. 2.7e+03;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 CTCTGGAGCGTTCTC 16
              ||||||||||||||||
Db        407 CTCTGGAGCGTTCTC 393


RESULT 13
BH501762
LOCUS       BH501762                640 bp    DNA     linear   GSS 13-DEC-2001
DEFINITION  BOHFO59TF BOHF Brassica oleracea genomic clone BOHFO59, genomic
            survey sequence.
ACCESSION   BH501762
VERSION     BH501762.1  GI:17709859
KEYWORDS    GSS.
SOURCE      Brassica oleracea
  ORGANISM  Brassica oleracea
            Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
            Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; rosids
            ; eurosids II; Brassicales; Brassicaceae; Brassica.
REFERENCE   1  (bases 1 to 640)
  AUTHORS   Town,C.D., Van Aken,S., Utterback,T., Koo,H. and Fraser,C.M.
  TITLE     Whole genome shotgun sequencing of Brassica oleracea
  JOURNAL   Unpublished
COMMENT     Other_GSSs: BOHFO59TR
            Contact: Chris Town
            TIGR
            9712 Medical Center Drive, Rockville, MD 20850, USA.
            Tel: 301-838-3523
            Fax: 301-838-0208
            Email: cdtown@tigr.org
            DNA is from a doubled haploid provided by Tom Osborn.
            Seq primer: TF
            Class: sheared ends.
FEATURES              Location/Qualifiers
     source           1. .640
                      /organism="Brassica oleracea"
                      /mol_type="genomic DNA"
                      /strain="TO1000DH3"
                      /db_xref="taxon:3712"
                      /clone="BOHFO59"
                      /clone_lib="BOHF"
                      /note="Vector: pHOS1; Site_1: BstXI; 2-3 kb sheared
                      genomic DNA inserted into pHOS1 using BstXI linkers"
BASE COUNT      202 a    120 c    141 g    177 t
ORIGIN

  Query Match             93.8%;  Score 15;  DB 28;  Length 640;
  Best Local Similarity   100.0%;  Pred. No. 2.8e+03;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 CTCTGGAGCGTTCTC 16
              ||||||||||||||||
Db        149 CTCTGGAGCGTTCTC 163


RESULT 14
BU106109/c
LOCUS       BU106109                654 bp    mRNA    linear   EST 25-NOV-2002
DEFINITION  603005752F1 CSEQCHL01 Gallus gallus cDNA clone ChEST23g13 5', mRNA
            sequence.
ACCESSION   BU106109
VERSION     BU106109.1  GI:25308148
KEYWORDS    EST.
SOURCE      Gallus gallus (chicken)
  ORGANISM  Gallus gallus
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Archosauria; Aves; Neognathae; Galliformes; Phasianidae;
            Phasianinae; Gallus.
REFERENCE   1  (bases 1 to 654)
  AUTHORS   Boardman,P.E., Sanz-Ezquerro,J., Overton,I.M., Burt,D.W., Bosch,E.,
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            Fong,W.T., Tickle,C., Brown,W.R.A., Wilson,S.A. and Hubbard,S.J.
  TITLE     A Comprehensive Collection of Chicken cDNAs
  JOURNAL   Curr. Biol. 12 (22), 1965-1969 (2002)
  MEDLINE   22335534
   PUBMED   12445392
COMMENT     Contact: Simon Hubbard
            Department of Biomolecular Sciences
            University of Manchester Institute of Science and Technology (UMIST
            )
            PO Box 88, Manchester, M60 1QD, UK
            Tel: 01612008930
            Fax: 01612360409
            Email: Simon.Hubbard@umist.ac.uk.
FEATURES             Location/Qualifiers
     source          1. .654
                     /organism="Gallus gallus"
                     /mol_type="mRNA"
                     /strain="White Leghorn, Hisex"
                     /db_xref="taxon:9031"
                     /clone="ChEST23g13"
                     /tissue_type="whole embryo"
                     /dev_stage="20-21"
                     /lab_host="DH10B"
                     /clone_lib="CSEQCHL01"
                     /note="Organ: whole embryo; Vector: pBluescript II KS(+);
                     Site_1: EcoRI; Site_2: Not1; Modification of pBluescript
                     II KS(+) [Stratagene] vector to accommodate cDNA produced
                     with the T-trimmed protocol (Construction of
                     uni-directionally cloned cDNA libraries from messenger RNA
                     for improved 3' end DNA sequencing by Glenn Fu, et al.
                     U.S. Patent # 6,387,624). Cut pBluescript II KS(+) with
                     NotI and EcoRI. Ligate in double stranded adaptor
                     containing BsgI and BamHI sites
                     [5'ggccgcgtgcagccccggatccgaaaaaaag]
                     [5'aattcttttttttcggatccgggggctgcacgc]"
BASE COUNT      202 a    130 c    172 g    150 t
ORIGIN

  Query Match             93.8%;  Score 15;  DB 13;  Length 654;
  Best Local Similarity   100.0%;  Pred. No. 2.8e+03;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 CTCTGGAGCGTTCTC 16
              ||||||||||||||||
Db         84 CTCTGGAGCGTTCTC 70


RESULT 15
BZ805477
LOCUS       BZ805477                 698 bp    DNA     linear   GSS 17-MAR-2003
DEFINITION  PUFHH39TD ZM_0.6_1.0_KB Zea mays genomic clone ZMMBTa319G06,
            genomic survey sequence.
ACCESSION   BZ805477
VERSION     BZ805477.1  GI:29015944
KEYWORDS    GSS.
SOURCE      Zea mays
  ORGANISM  Zea mays
            Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
            Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACCAD
            clade; Panicoideae; Andropogoneae; Zea.
REFERENCE   1  (bases 1 to 698)
  AUTHORS   Whitelaw,C.A., Quackenbush,J., Van Aken,S., Utterback,T., Resnick
            ,A., Fraser,C.M., Yuan,Y., San Miguel,P., Ma,J. and Bennetzen,J.
  TITLE     Maize Genomics Consortium
  JOURNAL   Unpublished
COMMENT     Other_GSSs: PUFHH39TB
            Contact: Cathy Whitelaw
            TIGR
            9712 Medical Center Drive, Rockville, MD 20850, USA
            Tel: 301-838-5843
            Fax: 301-838-0208
            Email: whitelaw@tigr.org
            Seq primer: TF
            Class: sheared ends.
FEATURES             Location/Qualifiers
     source          1. .698
                     /organism="Zea mays"
                     /mol_type="genomic DNA"
                     /strain="B73"
                     /db_xref="taxon:4577"
                     /clone="ZMMBTa319G06"
                     /clone_lib="ZM_0.6_1.0_KB"
                     /note="Vector: pCR4-TOPO; Site_1: EcoRI; 0.6-1.0 kb high
                     CoT selected genomic DNA library"
BASE COUNT      134 a    181 c    220 g    163 t
ORIGIN

  Query Match             93.8%;  Score 15;  DB 29;  Length 698;
  Best Local Similarity   100.0%;  Pred. No. 2.8e+03;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 CTCTGGAGCGTTCTC 16
              ||||||||||||||||
Db        623 CTCTGGAGCGTTCTC 637


Search completed: January 20, 2004, 18:44:44
Job time : 1032.72 secs
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OM nucleic - nucleic search, using sw model

Run on: January 20, 2004, 17:31:58 ; Search time 424.235 Seconds
(without alignments)
1157.177 Million cell updates/sec

Title: US-10-068-160-74
Perfect score: 12
Sequence: 1 tgcagcgttctc 12

Scoring table: OLIGO_NUC
Gapop 60.0 , Gapext 60.0

Searched: 2888711 seqs, 20454813386 residues

Word size : 0

Total number of hits satisfying chosen parameters: 3159832

Minimum DB seq length: 0
Maximum DB seq length: 500

Post-processing: Listing first 45 summaries

Database : GenEmbl:*
1: gb_ba:*
2: gb_htg:*
3: gb_in:*
4: gb_om:*
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8: gb_pl:*
9: gb_pr:*
10: gb_ro:*
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12: gb_sy:*
13: gb_un:*
14: gb_vi:*
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16: em_fun:*
17: em_hum:*
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35: em_htg_rod:*
36: em_htg_mam:*
37: em_htg_vrt:*
38: em_sy:*
39: em_htgo_hum:*
40: em_htgo_mus:*
41: em_htgo_other:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.		Score	% Query Match	Length	DB	ID	Description
1		12	100.0	12	6	AX194418	AX194418 Sequence
2		12	100.0	12	6	AX465368	AX465368 Sequence
3		12	100.0	20	6	AX104523	AX104523 Sequence
4		12	100.0	20	6	AX194425	AX194425 Sequence
5		12	100.0	20	6	AX355074	AX355074 Sequence
6		12	100.0	20	6	AX465375	AX465375 Sequence
7		12	100.0	20	6	AX547576	AX547576 Sequence
8		12	100.0	38	6	AX030078	AX030078 Sequence
9		12	100.0	38	6	E49388	E49388 Process for
10	c	12	100.0	88	6	AR208640	AR208640 Sequence
11		12	100.0	88	6	AR208641	AR208641 Sequence
12	c	12	100.0	88	6	AR300404	AR300404 Sequence
13		12	100.0	88	6	AR300405	AR300405 Sequence
14	c	12	100.0	88	6	AX000393	AX000393 Sequence
15		12	100.0	88	6	AX000394	AX000394 Sequence
16	c	12	100.0	88	6	AX000554	AX000554 Sequence
17		12	100.0	88	6	AX000555	AX000555 Sequence
18	c	12	100.0	88	6	BD080181	BD080181 Expressio
19		12	100.0	88	6	BD080182	BD080182 Expressio
20		12	100.0	228	9	HSA301497	AJ301497 Homo sapi
21	c	12	100.0	252	6	AX309558	AX309558 Sequence
22		12	100.0	258	6	BD049168	BD049168 Sequence
23	c	12	100.0	264	1	AF499608	AF499608 Microbact
24	c	12	100.0	291	14	AF379408	AF379408 Hepatitis
25	c	12	100.0	293	11	G04342	G04342 human STS W
26	c	12	100.0	310	1	LEU58343	U58343 Lignin enri
27		12	100.0	360	8	CNS019AV	AL111407 Botrytis
28	c	12	100.0	421	6	AR238175	AR238175 Sequence
29	c	12	100.0	421	6	AR257716	AR257716 Sequence
30	c	12	100.0	421	6	AR283762	AR283762 Sequence
31	c	12	100.0	421	6	AX366390	AX366390 Sequence
32		12	100.0	427	6	BD029029	BD029029 Sequence
33		12	100.0	431	6	AX192974	AX192974 Sequence
34		12	100.0	431	6	AX351431	AX351431 Sequence
35	c	12	100.0	435	6	AX340879	AX340879 Sequence
36		11	91.7	31	6	AX249007	AX249007 Sequence
37		11	91.7	61	6	AX103646	AX103646 Sequence
38	c	11	91.7	82	11	BX248453	BX248453 Arabidops
39		11	91.7	147	6	A06519	A06519 Artificial
40	c	11	91.7	147	6	A06520	A06520 Artificial
41	c	11	91.7	174	5	AB063270	AB063270 Gallus ga
42	c	11	91.7	186	6	AX505836	AX505836 Sequence
43	c	11	91.7	202	14	FDI303515	AJ303515 Foot-and-
44	c	11	91.7	203	11	BX248689	BX248689 Arabidops
45	c	11	91.7	211	5	AF395709	AF395709 Gasterost

ALIGNMENTS

RESULT 1
AX194418
LOCUS AX194418 12 bp DNA linear PAT 28-AUG-2001
DEFINITION Sequence 18 from Patent WO0151500.
ACCESSION AX194418
VERSION AX194418.1 GI:15385074
KEYWORDS .
SOURCE synthetic construct
ORGANISM synthetic construct
artificial sequences.
REFERENCE 1
AUTHORS Klinman,D., Ishii,K. and Verthelyi,D.
TITLE Oligodeoxynucleotide and its use to induce an immune response
JOURNAL Patent: WO 0151500-A 18 19-JUL-2001;
Secretary of the Department of Health and Human Services (US)

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FEATURES             Location/Qualifiers
     source          1. .12
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic DNA"
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ORIGIN

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  Best Local Similarity   100.0%;  Pred. No. 4.7e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db          1 TGCAGCGTTCTC 12


RESULT 2
AX465368
LOCUS       AX465368                 12 bp    DNA     linear   PAT 16-JUL-2002
DEFINITION  Sequence 36 from Patent WO0211761.
ACCESSION   AX465368
VERSION     AX465368.1  GI:21899731
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Mond,J.J., Prince,G. and Klinman,D.M.
  TITLE     Vaccine against RSV
  JOURNAL   Patent: WO 0211761-A 36 14-FEB-2002;
            HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY
            MEDICINE (US)
FEATURES             Location/Qualifiers
     source          1. .12
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic oligonucleotide"
BASE COUNT        1 a      4 c      3 g      4 t
ORIGIN

  Query Match             100.0%;  Score 12;  DB 6;  Length 12;
  Best Local Similarity   100.0%;  Pred. No. 4.7e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db          1 TGCAGCGTTCTC 12


RESULT 3
AX104523
LOCUS       AX104523                 20 bp    DNA     linear   PAT 30-APR-2001
DEFINITION  Sequence 715 from Patent WO0122972.
ACCESSION   AX104523
VERSION     AX104523.1  GI:13920720
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Krieg,A.M., Schetter,C. and Vollmer,J.C.
  TITLE     Immunostimulatory nucleic acids
  JOURNAL   Patent: WO 0122972-A 715 05-APR-2001;
            UNIVERSITY OF IOWA RESEARCH FOUNDATION (US) ; Coley Pharmaceutical
            GmbH (DE)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
BASE COUNT        3 a      7 c      4 g      6 t
ORIGIN

  Query Match             100.0%;  Score 12;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 4.6e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db          9 TGCAGCGTTCTC 20


RESULT 4
AX194425
LOCUS       AX194425                 20 bp    DNA     linear   PAT 28-AUG-2001
DEFINITION  Sequence 25 from Patent WO0151500.
ACCESSION   AX194425
VERSION     AX194425.1  GI:15385081
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Klinman,D., Ishii,K. and Verthelyi,D.
  TITLE     Oligodeoxynucleotide and its use to induce an immune response
  JOURNAL   Patent: WO 0151500-A 25 19-JUL-2001;
            Secretary of the Department of Health and Human Services (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic DNA"
BASE COUNT        3 a      7 c      4 g      6 t
ORIGIN

  Query Match             100.0%;  Score 12;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 4.6e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db          9 TGCAGCGTTCTC 20


RESULT 5
AX355074
LOCUS       AX355074                 20 bp    DNA     linear   PAT 06-FEB-2002
DEFINITION  Sequence 102 from Patent WO0197843.
ACCESSION   AX355074
VERSION     AX355074.1  GI:18619741
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Weiner,G. and Hartmann,G.
  TITLE     Methods for enhancing antibody-induced cell lysis and treating
            cancer
  JOURNAL   Patent: WO 0197843-A 102 27-DEC-2001;
            UNIVERSITY OF IOWA RESEARCH FOUNDATION (US)
FEATURES             Location/Qualifiers
     source          1. .20
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                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
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BASE COUNT        3 a      7 c      4 g      6 t
ORIGIN

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  Best Local Similarity   100.0%;  Pred. No. 4.6e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;
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Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db          9 TGCAGCGTTCTC 20


RESULT 6
AX465375
LOCUS       AX465375                  20 bp    DNA     linear   PAT 16-JUL-2002
DEFINITION  Sequence 43 from Patent WO0211761.
ACCESSION   AX465375
VERSION     AX465375.1  GI:21899738
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Mond,J.J., Prince,G. and Klinman,D.M.
  TITLE     Vaccine against RSV
  JOURNAL   Patent: WO 0211761-A 43 14-FEB-2002;
            HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY
            MEDICINE (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic oligonucleotide"
BASE COUNT        3 a      7 c      4 g      6 t
ORIGIN

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  Best Local Similarity   100.0%;  Pred. No. 4.6e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db          9 TGCAGCGTTCTC 20


RESULT 7
AX547576
LOCUS       AX547576                  20 bp    DNA     linear   PAT 26-NOV-2002
DEFINITION  Sequence 715 from Patent WO02053141.
ACCESSION   AX547576
VERSION     AX547576.1  GI:25812720
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Bratzler,R.L.
  TITLE     Inhibition of angiogenesis by nucleic acids
  JOURNAL   Patent: WO 02053141-A 715 11-JUL-2002;
            Coley Pharmaceutical Group, Inc. (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic Sequence"
BASE COUNT        3 a      7 c      4 g      6 t
ORIGIN

  Query Match             100.0%;  Score 12;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 4.6e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db          9 TGCAGCGTTCTC 20


RESULT 8
AX030078
LOCUS       AX030078                  38 bp    DNA     linear   PAT 16-SEP-2000
DEFINITION  Sequence 8 from Patent EP1016710.
ACCESSION   AX030078
VERSION     AX030078.1  GI:10190295
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Nakanishi,K., Aleshin,V.V., Livshits,V.A., Tokhmakova,I.L.,
            Troshin,P.V. and Zakataeva,N.P.
  TITLE     Method for producing l-amino acids
  JOURNAL   Patent: EP 1016710-A 8 05-JUL-2000;
            AJINOMOTO KK (JP)
FEATURES             Location/Qualifiers
     source          1. .38
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="primer for amplifying Escherichia coli yggA gene"
BASE COUNT        7 a      12 c     10 g      9 t
ORIGIN

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  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db          8 TGCAGCGTTCTC 19


RESULT 9
E49388
LOCUS       E49388                    38 bp    DNA     linear   PAT 31-JAN-2002
DEFINITION  Process for producing L-amino acid.
ACCESSION   E49388
VERSION     E49388.1  GI:18628079
KEYWORDS    JP 2000189180-A/8.
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1  (bases 1 to 38)
  AUTHORS   Rivishittsu,V.A., Zakataeva,N.P., Nakanishi,K., Aryoshin,V.V.,
            Toroshin,P.V. and Tokumakova,I.R.
  TITLE     Process for producing L-amino acid
  JOURNAL   Patent: JP 2000189180-A 8 11-JUL-2000;
            AJINOMOTO CO INC
COMMENT     OS   Artificial Sequence
            PN   JP 2000189180-A/8
            PD   11-JUL-2000
            PF   28-DEC-1999 JP 1999373651
            PR   30-DEC-1998 RU     98124016,09-MAR-1999 RU     99104431 PI
            VITARI ARUKAJEVICHI RIVISHITTSU,NATARIYA PAVUROVUNA
             ZAKATAEVA,
            PI   KAZUO NAKANISHI,VLADIMIR VENIYAMINOVICHI ARYOSHIN, PI   PETER
            VIRAJIMIROVICCHI TOROSHIN,IRINA RIVOVUNA TOKUMAKOVA PC
            C12N15/09,C12N1/21,C12P13/04//(C12N1/21,C12R1:19),(C12P13/04, PC
            C12R1:19),
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            FH   Key             Location/Qualifiers
            FT   source          1. .38
            FT                   /organism='Artificial Sequence'.
FEATURES             Location/Qualifiers
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                     /mol_type="genomic DNA"
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BASE COUNT        7 a      12 c     10 g      9 t
ORIGIN
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  Best Local Similarity  100.0%;  Pred. No. 4.4e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db          8 TGCAGCGTTCTC 19


RESULT 10
AR208640/c
LOCUS       AR208640                  88 bp    DNA     linear   PAT 20-JUN-2002
DEFINITION  Sequence 12 from patent US 6383782.
ACCESSION   AR208640
VERSION     AR208640.1  GI:21509847
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 88)
  AUTHORS   Barratt,D.Graham. and Needham,M.Ronald.Charles.
  TITLE     MCP-1 analogs
  JOURNAL   Patent: US 6383782-A 12 07-MAY-2002;
FEATURES             Location/Qualifiers
     source          1. .88
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BASE COUNT       29 a     20 c     18 g     21 t
ORIGIN

  Query Match            100.0%;  Score 12;  DB 6;  Length 88;
  Best Local Similarity  100.0%;  Pred. No. 4.3e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db         65 TGCAGCGTTCTC 54


RESULT 11
AR208641
LOCUS       AR208641                  88 bp    DNA     linear   PAT 20-JUN-2002
DEFINITION  Sequence 13 from patent US 6383782.
ACCESSION   AR208641
VERSION     AR208641.1  GI:21509848
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 88)
  AUTHORS   Barratt,D.Graham. and Needham,M.Ronald.Charles.
  TITLE     MCP-1 analogs
  JOURNAL   Patent: US 6383782-A 13 07-MAY-2002;
FEATURES             Location/Qualifiers
     source          1. .88
                     /organism="unknown"
BASE COUNT       20 a     19 c     21 g     28 t
ORIGIN

  Query Match            100.0%;  Score 12;  DB 6;  Length 88;
  Best Local Similarity  100.0%;  Pred. No. 4.3e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db         28 TGCAGCGTTCTC 39


RESULT 12
AR300404/c
LOCUS       AR300404                  88 bp    DNA     linear   PAT 12-JUN-2003
DEFINITION  Sequence 3 from patent US 6537779.
ACCESSION   AR300404
VERSION     AR300404.1  GI:31687841
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 88)
  AUTHORS   Kara,B.V., Pioli,D., Bundell,K.R. and Hockney,R.C.
  TITLE     T7 promoter-based expression system
  JOURNAL   Patent: US 6537779-A 3 25-MAR-2003;
FEATURES             Location/Qualifiers
     source          1. .88
                     /organism="unknown"
BASE COUNT       29 a     20 c     18 g     21 t
ORIGIN

  Query Match            100.0%;  Score 12;  DB 6;  Length 88;
  Best Local Similarity  100.0%;  Pred. No. 4.3e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db         65 TGCAGCGTTCTC 54


RESULT 13
AR300405
LOCUS       AR300405                  88 bp    DNA     linear   PAT 12-JUN-2003
DEFINITION  Sequence 4 from patent US 6537779.
ACCESSION   AR300405
VERSION     AR300405.1  GI:31687842
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 88)
  AUTHORS   Kara,B.V., Pioli,D., Bundell,K.R. and Hockney,R.C.
  TITLE     T7 promoter-based expression system
  JOURNAL   Patent: US 6537779-A 4 25-MAR-2003;
FEATURES             Location/Qualifiers
     source          1. .88
                     /organism="unknown"
BASE COUNT       20 a     19 c     21 g     28 t
ORIGIN

  Query Match            100.0%;  Score 12;  DB 6;  Length 88;
  Best Local Similarity  100.0%;  Pred. No. 4.3e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db         28 TGCAGCGTTCTC 39


RESULT 14
AX000393/c
LOCUS       AX000393                  88 bp    DNA     linear   PAT 10-MAR-2000
DEFINITION  Sequence 3 from Patent WO9905297.
ACCESSION   AX000393
VERSION     AX000393.1  GI:7240804
KEYWORDS    .
SOURCE      unidentified
  ORGANISM  unidentified
            unclassified.
REFERENCE   1  (bases 1 to 88)
  AUTHORS   Pioli,D. and Bundell,K.R.
  TITLE     T7 PROMOTER-BASED EXPRESSION SYSTEM
  JOURNAL   Patent: WO 9905297-A 3 04-FEB-1999;
            PIOLI DAVID (GB); ZENECA LTD (GB)
FEATURES             Location/Qualifiers
     source          1. .88
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BASE COUNT       29 a     20 c     18 g     21 t
ORIGIN

  Query Match             100.0%;  Score 12;  DB 6;  Length 88;
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  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
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Db         65 TGCAGCGTTCTC 54


RESULT 15
AX000394
LOCUS       AX000394                  88 bp    DNA     linear   PAT 10-MAR-2000
DEFINITION  Sequence 4 from Patent WO9905297.
ACCESSION   AX000394
VERSION     AX000394.1  GI:7240805
KEYWORDS    .
SOURCE      unidentified
  ORGANISM  unidentified
            unclassified.
REFERENCE   1  (bases 1 to 88)
  AUTHORS   Pioli,D. and Bundell,K.R.
  TITLE     T7 PROMOTER-BASED EXPRESSION SYSTEM
  JOURNAL   Patent: WO 9905297-A 4 04-FEB-1999;
            PIOLI DAVID (GB); ZENECA LTD (GB)
FEATURES             Location/Qualifiers
     source          1. .88
                     /organism="unidentified"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32644"
BASE COUNT       20 a     19 c     21 g     28 t
ORIGIN

  Query Match             100.0%;  Score 12;  DB 6;  Length 88;
  Best Local Similarity   100.0%;  Pred. No. 4.3e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db         28 TGCAGCGTTCTC 39


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GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

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(without alignments)
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Title: US-10-068-160-74
Perfect score: 12
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Gapop 60.0 , Gapext 60.0

Searched: 2552756 seqs, 1349719017 residues

Word size : 0

Total number of hits satisfying chosen parameters: 3959256

Minimum DB seq length: 0
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Post-processing: Listing first 45 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	12	100.0	12	22	AAS09568	Immunoreactive CpG
2	12	100.0	12	22	AAC80598	Immunogenic CpG ol
3	12	100.0	12	24	ABK46446	Immunostimulatory
4	12	100.0	20	22	AAS09575	Immunoreactive CpG
5	12	100.0	20	22	AAF99516	Immunostimulatory
6	12	100.0	20	22	AAC80605	Immunogenic CpG ol
7	12	100.0	20	24	ABS78231	Angiogenesis inhib
8	12	100.0	20	24	ABK46453	Immunostimulatory
9	12	100.0	20	24	ABL38734	Immunostimulatory
10	12	100.0	38	21	AAA52687	Escherichia coli y
c 11	12	100.0	88	20	AAX21528	Vector pZT7#3.3 co
12	12	100.0	88	20	AAX21529	Vector pZT7#3.3 co
13	12	100.0	177	22	AAL02385	Human reproductive
c 14	12	100.0	252	24	ABN76325	Human transcriptio
c 15	12	100.0	254	20	AAX37307	Human breast-speci
16	12	100.0	258	21	AAC25423	Human secreted pro
17	12	100.0	353	24	ABN25861	Human ORFX polynuc
c 18	12	100.0	375	25	ABX36533	Bovine EST associa
c 19	12	100.0	417	24	ABN91391	Staphylococcus epi
c 20	12	100.0	421	21	AAA69847	Human ovarian carc
c 21	12	100.0	421	24	ABN72741	Ovarian carcinoma
22	12	100.0	427	21	AAC05284	Human secreted pro
23	12	100.0	431	22	AAI28992	Colon tumour relat
24	12	100.0	431	24	ABK27741	Human colon cancer
25	12	100.0	431	25	ABZ33178	Human colon tumour
c 26	12	100.0	435	24	ABL37537	Human colon tumour
27	12	100.0	449	23	AAS92959	DNA encoding novel
c 28	11	91.7	21	22	AAF95581	Human gene single
c 29	11	91.7	23	21	AAZ88370	Oligonucleotide PC
30	11	91.7	31	22	AAI30598	Human single nucle
31	11	91.7	61	22	AAF61495	Leu-hirudin/beta l
c 32	11	91.7	105	22	AAF90441	Human cytokine syn
c 33	11	91.7	114	23	ABS42271	Human liver single
34	11	91.7	147	6	AAN50295	Ligated oligonucle
35	11	91.7	182	25	ABX18882	Human GDP-mannose
c 36	11	91.7	186	24	ABZ12726	Arabidopsis thalia
c 37	11	91.7	200	24	AAD41237	Murine neuronal ty
c 38	11	91.7	207	22	AAK24762	Human brain expres
c 39	11	91.7	207	24	ABS24237	Human genome-deriv
40	11	91.7	236	19	AAV09219	Human MC proprotei
41	11	91.7	246	21	AAC19966	Human secreted pro
c 42	11	91.7	257	25	ABX90721	Murine gene trappe
43	11	91.7	262	22	AAK25051	Human brain expres
44	11	91.7	262	22	AAI28092	Probe #18025 for g
c 45	11	91.7	262	24	ABV96046	Human pancreatic c

ALIGNMENTS

RESULT 1
AAS09568
ID AAS09568 standard; DNA; 12 BP.
XX
AC AAS09568;
XX
DT 26-SEP-2001 (first entry)
XX
DE Immunoreactive CpG sequence-containing oligonucleotide #18.
XX
KW CpG sequence; immune response; non-B cell activation; interferon gamma;
KW IFN-gamma; humoral; antibody production; interleukin-6 production;
KW therapeutic; allergy; asthma; cancer; autoimmune disorder; infection;
KW bio-warfare; vaccine; antisense therapy; eczema; allergic rhinitis;
KW coryza; hay fever; urticaria; hives; food allergy; atopic condition;
KW hepatitis; human immunodeficiency virus; HIV; malaria; Francisella;
KW lupus erythematosus; rheumatoid arthritis; multiple sclerosis;
KW schistosomiasis; tuberculosis; acquired immunodeficiency syndrome; AIDS;
KW Leishmania; Ebola; Anthrax; Listeria; ss.
XX
OS Synthetic.
XX
PN WO200151500-A1.
XX
PD 19-JUL-2001.
XX
PF 12-JAN-2001; 2001WO-US01122.
XX
PR 14-JAN-2000; 2000US-0176115.
XX
PA (USSH) US DEPT HEALTH & HUMAN SERVICES.

XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-442129/47.
XX
PT Oligodeoxynucleotides for inducing an immune response to treat and
PT prevent an allergic reaction, cancer, an autoimmune disorder and
PT symptoms resulting from exposure to bio-warfare agents, comprise
PT multiple CpG sequences -
XX
PS Claim 5; Page 30; 48pp; English.
XX
CC AAS09551-AAS09662 represent oligodeoxynucleotides (ODN) of at least 10
CC nucleotides comprising multiple CpG sequences, where one of the CpG
CC sequences is different from another of the multiple CpG sequences.
CC The ODN are useful for inducing an immune response, preferably a cell-
CC mediated immune response, involving non-B cell activation, interferon
CC gamma (IFN-gamma) production or a humoral immune response involving B
CC cell activation, antibody and interleukin-6 production in a host, for
CC treating, preventing or ameliorating an allergic reaction, e.g. asthma,
CC cancer, e.g. solid tumour cancer, a disease associated with the immune
CC system e.g. autoimmune disorder or an immune system deficiency, infection
CC or a symptom resulting from exposure to bio-warfare agent in a human. The
CC induction of immune response improves the efficacy of a vaccine and is
CC used in antisense therapy. The ODN are useful for treating, preventing or
CC ameliorating allergic reactions, including eczema, allergic rhinitis or
CC coryza, hay fever, bronchial asthma, urticaria (hives), food allergies
CC and other atopic conditions, for improving the efficacy of vaccines
CC against hepatitis A, B and C, human immunodeficiency virus (HIV) and
CC malaria, for treating immune system deficiencies, e.g. lupus
CC erythematosus and autoimmune diseases such as rheumatoid arthritis and
CC multiple sclerosis, infections including Francisella, schistosomiasis,
CC tuberculosis, acquired immunodeficiency syndrome (AIDS), Leishmania and
CC symptoms resulting from exposure of bio-warfare agent, including Ebola,
CC Anthrax and Listeria.
XX
SQ Sequence 12 BP; 1 A; 4 C; 3 G; 4 T; 0 other;

Query Match 100.0%; Score 12; DB 22; Length 12;
Best Local Similarity 100.0%; Pred. No. 3e+02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TGCAGCGTTCTC 12
||||||||||||
Db 1 TGCAGCGTTCTC 12

RESULT 2
AAC80598
ID AAC80598 standard; DNA; 12 BP.
XX
AC AAC80598;
XX
DT 14-FEB-2001 (first entry)
XX
DE Immunogenic CpG oligodeoxynucleotide, SEQ ID NO:18.
XX
KW CpG oligodeoxynucleotide; unmethylated; antigen-presenting cell;
KW immunogenic; cytokine release; natural killer cell; NK cell activation;
KW cell-mediated immune response; T-cell response; humoral response;
KW B-cell response; antibody production; immune response induction;
KW vaccine; allergy; asthma; infection; bacterial; viral; fungal; protozoal;
KW parasitic; tuberculosis; AIDS; autoimmune disease; lupus erythematosus;
KW rheumatoid arthritis; multiple sclerosis; solid tumour; cancer;
KW immune deficiency; biological warfare agent; cytostatic; antiarthritic;
KW antimicrobial; antiallergic; protozoacide; tuberculostatic;
KW antiasthmatic; dermatological; phosphorothioate; ss.
XX
OS Synthetic.
XX
PN WO200061151-A2.
XX
PD 19-OCT-2000.
XX
PF 12-APR-2000; 2000WO-US09839.
XX
PR 12-APR-1999; 99US-0128898.
XX
PA (KLIN/) KLINMAN D.
PA (ISHI/) ISHII K.
PA (VERT/) VERTHELYI D.
XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-006880/01.
XX
PT Novel oligonucleotides useful for the prevention and treatment of
PT allergies, cancer, and autoimmune disorders and for ameliorating
PT symptoms resulting from exposure to a bio-warfare agent -
XX
PS Claim 4; Page 27; 46pp; English.
XX
CC The invention relates to novel immunogenic CpG oligodeoxynucleotides
CC (AAC80581-C80723). The oligonucleotide are at least 10 bases long
CC and comprise one of the generic sequences 5'-NNNT-CpG-WNNN-3' or
CC 5'-RY-CpG-RY-3'. The central CpG motif is unmethylated, and the
CC oligonucleotides optionally have phosphorothioate linkages which make
CC them more resistant to degradation. The invention also relates to an
CC oligonucleotide delivery complex comprising an oligonucleotide of the
CC invention and a targetting agent, and a pharmaceutical composition
CC comprising the oligonucleotide delivery complex. The oligonucleotides
CC are able to induce either a cell-mediated (T-cell) response or a humoral
CC (B-cell, antibody) response, with oligonucleotides of the sequence
CC 5'-RY-CpG-RY-3' being able to induce a cell-mediated response, and those
CC of the sequence 5'-NNNT-CpG-WNNN-3' being able to induce a humoral
CC response. It is thought that after administration, the oligonucleotide
CC acts on antigen-presenting cells (e.g., macrophages and dendritic
CC cells), which then release cytokines, leading to activation of natural
CC killer (NK) cells. A cell-mediated or humoral response can then occur by
CC activation of T- or B-cells. The induction of an immune response is
CC useful for treating, preventing or ameliorating an allergic reaction
CC (preferably asthma), or an infection, where an immunogenic CpG
CC oligonucleotide is administered either alone or in combination with an
CC anti-allergenic agent or anti-infectious agent. The allergic conditions
CC which may be treated include eczema, allergic rhinitis, hayfever,
CC urticaria, food allergies and other atopic conditions, and the
CC infections which may be treated include viral, bacterial, fungal and
CC protozoal infections such as tuberculosis, AIDS, leishmania and
CC schistosomiasis. Immune response induction may also be used in the
CC treatment of an autoimmune disorder (e.g., lupus erythematosus,
CC rheumatoid arthritis and multiple sclerosis), a disease associated with
CC immune system deficiency, and symptoms resulting from exposure to an
CC agent of biological warfare. An immunogenic CpG oligonucleotide, either
CC alone or in combination with an anti-cancer agent, is useful for treating
CC solid tumour cancer. The induction of an immune response is used in
CC antisense therapy and to improve the efficacy of a vaccine. The
CC oligonucleotide is preferably administered to lymphocytes ex vivo,
CC producing activated lymphocytes which are then administered to the host.
CC The present sequence represents an immunogenic CpG oligodeoxynucleotide
CC of the invention.
XX
SQ Sequence 12 BP; 1 A; 4 C; 3 G; 4 T; 0 other;

Query Match 100.0%; Score 12; DB 22; Length 12;
Best Local Similarity 100.0%; Pred. No. 3e+02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TGCAGCGTTCTC 12
||||||||||||
Db 1 TGCAGCGTTCTC 12

RESULT 3
ABK46446
ID ABK46446 standard; DNA; 12 BP.
XX

AC ABK46446;
XX
DT 05-JUN-2002 (first entry)
XX
DE Immunostimulatory unmethylated CpG oligodideoxynucleotide #36.
XX
KW unmethylated CpG; oligdideoxynucleotide; ODN; virucide; vaccine;
KW Paramyxoviridae; F protein; respiratory syncytial virus; RSV;
KW viral bronchiolitis; pneumonia; infectious pulmonary disease;
KW bronchopulmonary dysplasia; congenital heart condition; ss.
XX
OS Synthetic.
XX
PN WO200211761-A2.
XX
PD 14-FEB-2002.
XX
PF 09-AUG-2001; 2001WO-US41633.
XX
PR 10-AUG-2000; 2000US-224011P.
PR 01-SEP-2000; 2000US-229307P.
XX
PA (JACK-) JACKSON FOUND ADVANCEMENT MILITARY MED.
XX
PI Mond JJ, Prince G, Klinman DM;
XX
DR WPI; 2002-227118/28.
XX
PT Vaccine for immunising patient against respiratory syncytial virus, has
PT epitopes of Paramyxoviridae F protein, and cytosine followed by guanine
PT linked by phosphate bond-oligodideoxynucleotides -
XX
PS Claim 4; Page 7; 30pp; English.
XX
CC The invention describes a vaccine comprising one or more epitopes of a
CC Paramyxoviridae F protein, and one or more CpG (cytosine followed by
CC guanine linked by phosphate bond)-oligodideoxynucleotides (ODNs). The
CC vaccine is useful for vaccinating a patient especially against viruses
CC of the Paramyxoviridae family e.g. respiratory syncytial virus (RSV),
CC the primary cause of viral bronchiolitis and pneumonia in infants and
CC children, and infectious pulmonary disease in infants. RSV has been
CC particularly implicated in death of infants that are premature, have
CC bronchopulmonary dysplasia, or congenital heart conditions. This
CC sequence represents an oligodideoxynucleotide that can be used in the
CC creation of the vaccine.
XX
SQ Sequence 12 BP; 1 A; 4 C; 3 G; 4 T; 0 other;

Query Match 100.0%; Score 12; DB 24; Length 12;
Best Local Similarity 100.0%; Pred. No. 3e+02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TGCAGCGTTCTC 12
||||||||||||
Db 1 TGCAGCGTTCTC 12

RESULT 4
AAS09575
ID AAS09575 standard; DNA; 20 BP.
XX
AC AAS09575;
XX
DT 26-SEP-2001 (first entry)
XX
DE Immunoreactive CpG sequence-containing oligonucleotide #25.
XX
KW CpG sequence; immune response; non-B cell activation; interferon gamma;
KW IFN-gamma; humoral; antibody production; interleukin-6 production;
KW therapeutic; allergy; asthma; cancer; autoimmune disorder; infection;
KW bio-warfare; vaccine; antisense therapy; eczema; allergic rhinitis;
KW coryza; hay fever; urticaria; hives; food allergy; atopic condition;
KW hepatitis; human immunodeficiency virus; HIV; malaria; Francisella;
KW lupus erythematosus; rheumatoid arthritis; multiple sclerosis;
KW schistosomiasis; tuberculosis; acquired immunodeficiency syndrome; AIDS;
KW Leishmania; Ebola; Anthrax; Listeria; ss.
XX
OS Synthetic.
XX
PN WO200151500-A1.
XX
PD 19-JUL-2001.
XX
PF 12-JAN-2001; 2001WO-US01122.
XX
PR 14-JAN-2000; 2000US-0176115.
XX
PA (USSH) US DEPT HEALTH & HUMAN SERVICES.
XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-442129/47.
XX
PT Oligodeoxynucleotides for inducing an immune response to treat and
PT prevent an allergic reaction, cancer, an autoimmune disorder and
PT symptoms resulting from exposure to bio-warfare agents, comprise
PT multiple CpG sequences -
XX
PS Claim 5; Page 31; 48pp; English.
XX
CC AAS09551-AAS09662 represent oligodeoxynucleotides (ODN) of at least 10
CC nucleotides comprising multiple CpG sequences, where one of the CpG
CC sequences is different from another of the multiple CpG sequences.
CC The ODN are useful for inducing an immune response, preferably a cell-
CC mediated immune response, involving non-B cell activation, interferon
CC gamma (IFN-gamma) production or a humoral immune response involving B
CC cell activation, antibody and interleukin-6 production in a host, for
CC treating, preventing or ameliorating an allergic reaction, e.g. asthma,
CC cancer, e.g. solid tumour cancer, a disease associated with the immune
CC system e.g. autoimmune disorder or an immune system deficiency, infection
CC or a symptom resulting from exposure to bio-warfare agent in a human. The
CC induction of immune response improves the efficacy of a vaccine and is
CC used in antisense therapy. The ODN are useful for treating, preventing or
CC ameliorating allergic reactions, including eczema, allergic rhinitis or
CC coryza, hay fever, bronchial asthma, urticaria (hives), food allergies
CC and other atopic conditions, for improving the efficacy of vaccines
CC against hepatitis A, B and C, human immunodeficiency virus (HIV) and
CC malaria, for treating immune system deficiencies, e.g. lupus
CC erythematosus and autoimmune diseases such as rheumatoid arthritis and
CC multiple sclerosis, infections including Francisella, schistosomiasis,
CC tuberculosis, acquired immunodeficiency syndrome (AIDS), Leishmania and
CC symptoms resulting from exposure of bio-warfare agent, including Ebola,
CC Anthrax and Listeria.
XX
SQ Sequence 20 BP; 3 A; 7 C; 4 G; 6 T; 0 other;

Query Match 100.0%; Score 12; DB 22; Length 20;
Best Local Similarity 100.0%; Pred. No. 2.9e+02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TGCAGCGTTCTC 12
||||||||||||
Db 9 TGCAGCGTTCTC 20

RESULT 5
AAF99516
ID AAF99516 standard; DNA; 20 BP.
XX
AC AAF99516;
XX
DT 12-JUN-2001 (first entry)
XX
DE Immunostimulatory nucleic acid #632.
XX
KW Vaccine; cytostatic; virucidal; bactericidal; fungicidal; anti-parasitic;

KW immunostimulatory; tumour; viral infection; bacterial infection;
KW fungal infection; parasitic infection; cancer; asthma;
KW infectious disease; allergy; immune deficiency; phosphorothioate; ss.
XX
OS Synthetic.
XX
PN WO200122972-A2.
XX
PD 05-APR-2001.
XX
PF 25-SEP-2000; 2000WO-US26383.
XX
PR 25-SEP-1999; 99US-0156113.
PR 27-SEP-1999; 99US-0156135.
PR 23-AUG-2000; 2000US-0227436.
XX
PA (IOWA) UNIV IOWA RES FOUND.
PA (COLE-) COLEY PHARM GMBH.
XX
PI Krieg AM, Schetter C, Vollmer J;
XX
DR WPI; 2001-273485/28.
XX
PT Vaccinating against tumors, infectious diseases, allergies and asthma
PT using immunostimulatory Py-rich and TG nucleic acids -
XX
PS Claim 101; Page 52; 338pp; English.
XX
CC The present invention relates to a method for stimulating an immune
CC response. The method comprises administering an immunostimulatory nucleic
CC acid to a non-rodent subject in sufficient quantity to stimulate an
CC immune response. The present sequence is one such immunostimulatory
CC nucleic acid. The immunostimulatory nucleic acids can be pyrimidine rich
CC (py-rich) or thymidine (T) rich. The method is used to vaccinate subjects
CC against tumour antigens, viral antigens (e.g. herpesviridae, retroviridae
CC and/or orthomyxoviridae), bacterial antigens (e.g. toxoplasma,
CC haemophilus, campylobacter, clostridium, Escherichia coli and/or
CC staphylococcus), fungal antigens and/or parasitic antigens. The method is
CC also useful for preventing cancer, asthma, infectious disease, allergy or
CC immune deficiency. The present sequence can also be used to redirect a
CC Th2 to a Th1 immune response and to activate immune cells.
CC Note: the present sequence may have a phosphorothioate backbone.
XX
SQ Sequence 20 BP; 3 A; 7 C; 4 G; 6 T; 0 other;

Query Match 100.0%; Score 12; DB 22; Length 20;
Best Local Similarity 100.0%; Pred. No. 2.9e+02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TGCAGCGTTCTC 12
||||||||||||
Db 9 TGCAGCGTTCTC 20

RESULT 6
AAC80605
ID AAC80605 standard; DNA; 20 BP.
XX
AC AAC80605;
XX
DT 14-FEB-2001 (first entry)
XX
DE Immunogenic CpG oligodeoxynucleotide, SEQ ID NO:25.
XX
KW CpG oligodeoxynucleotide; unmethylated; antigen-presenting cell;
KW immunogenic; cytokine release; natural killer cell; NK cell activation;
KW cell-mediated immune response; T-cell response; humoral response;
KW B-cell response; antibody production; immune response induction;
KW vaccine; allergy; asthma; infection; bacterial; viral; fungal; protozoal;
KW parasitic; tuberculosis; AIDS; autoimmune disease; lupus erythematosus;
KW rheumatoid arthritis; multiple sclerosis; solid tumour; cancer;
KW immune deficiency; biological warfare agent; cytostatic; antiarthritic;
KW antimicrobial; antiallergic; protozoacide; tuberculostatic;
KW antiasthmatic; dermatological; phosphorothioate; ss.
XX
OS Synthetic.
XX
PN WO200061151-A2.
XX
PD 19-OCT-2000.
XX
PF 12-APR-2000; 2000WO-US09839.
XX
PR 12-APR-1999; 99US-0128898.
XX
PA (KLIN/) KLINMAN D.
PA (ISHI/) ISHII K.
PA (VERT/) VERTHELYI D.
XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-006880/01.
XX
PT Novel oligonucleotides useful for the prevention and treatment of
PT allergies, cancer, and autoimmune disorders and for ameliorating
PT symptoms resulting from exposure to a bio-warfare agent -
XX
PS Claim 4; Page 28; 46pp; English.
XX
CC The invention relates to novel immunogenic CpG oligodeoxynucleotides
CC (AAC80581-C80723). The oligonucleotide are at least 10 bases long
CC and comprise one of the generic sequences 5'-NNNT-CpG-WNNN-3' or
CC 5'-RY-CpG-RY-3'. The central CpG motif is unmethylated, and the
CC oligonucleotides optionally have phosphorothioate linkages which make
CC them more resistant to degradation. The invention also relates to an
CC oligonucleotide delivery complex comprising an oligonucleotide of the
CC invention and a targetting agent, and a pharmaceutical composition
CC comprising the oligonucleotide delivery complex. The oligonucleotides
CC are able to induce either a cell-mediated (T-cell) response or a humoral
CC (B-cell, antibody) response, with oligonucleotides of the sequence
CC 5'-RY-CpG-RY-3' being able to induce a cell-mediated response, and those
CC of the sequence 5'-NNNT-CpG-WNNN-3' being able to induce a humoral
CC response. It is thought that after administration, the oligonucleotide
CC acts on antigen-presenting cells (e.g., macrophages and dendritic
CC cells), which then release cytokines, leading to activation of natural
CC killer (NK) cells. A cell-mediated or humoral response can then occur by
CC activation of T- or B-cells. The induction of an immune response is
CC useful for treating, preventing or ameliorating an allergic reaction
CC (preferably asthma), or an infection, where an immunogenic CpG
CC oligonucleotide is administered either alone or in combination with an
CC anti-allergenic agent or anti-infectious agent. The allergic conditions
CC which may be treated include eczema, allergic rhinitis, hayfever,
CC urticaria, food allergies and other atopic conditions, and the
CC infections which may be treated include viral, bacterial, fungal and
CC protozoal infections such as tuberculosis, AIDS, leishmania and
CC schistosomiasis. Immune response induction may also be used in the
CC treatment of an autoimmune disorder (e.g., lupus erythematosus,
CC rheumatoid arthritis and multiple sclerosis), a disease associated with
CC immune system deficiency, and symptoms resulting from exposure to an
CC agent of biological warfare. An immunogenic CpG oligonucleotide, either
CC alone or in combination with an anti-cancer agent, is useful for treating
CC solid tumour cancer. The induction of an immune response is used in
CC antisense therapy and to improve the efficacy of a vaccine. The
CC oligonucleotide is preferably administered to lymphocytes ex vivo,
CC producing activated lymphocytes which are then administered to the host.
CC The present sequence represents an immunogenic CpG oligodeoxynucleotide
CC of the invention.
XX
SQ Sequence 20 BP; 3 A; 7 C; 4 G; 6 T; 0 other;

Query Match 100.0%; Score 12; DB 22; Length 20;
Best Local Similarity 100.0%; Pred. No. 2.9e+02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TGCAGCGTTCTC 12
||||||||||||

```
Db          9 TGCAGCGTTCTC 20


RESULT 7
ABS78231
ID   ABS78231 standard; DNA; 20 BP.
XX
AC   ABS78231;
XX
DT   13-DEC-2002  (first entry)
XX
DE   Angiogenesis inhibitory oligonucleotide #715.
XX
KW   Angiogenesis inhibitor; ss; angiogenesis; solid tumour growth;
KW   tumour metastasis; precancerous lesion; rheumatoid arthritis;
KW   psoriasis; diabetic retinopathy; retinopathy of prematurity;
KW   macular degeneration; corneal graft rejection; neovascular glaucoma;
KW   retrolental fibroplasia; rubeosis; Osler-Webber Syndrome;
KW   myocardial angiogenesis; plaque neovascularisation; telangiectasia;
KW   haemophiliac joint; angiofibroma; wound granulation;
KW   intestinal adhesion; atherosclerosis; scleroderma; hypertrophic scar.
XX
OS   Synthetic.
XX
PN   WO200253141-A2.
XX
PD   11-JUL-2002.
XX
PF   14-DEC-2001; 2001WO-US48458.
XX
PR   14-DEC-2000; 2000US-255534P.
XX
PA   (COLE-) COLEY PHARM GROUP INC.
XX
PI   Bratzler RL;
XX
DR   WPI; 2002-566690/60.
XX
PT   Inhibiting angiogenesis in a subject, involves administering at least
PT   one antiangiogenic nucleic acid molecule to the subject  -
XX
PS   Claim 2; Page 32; 276pp; English.
XX
CC   The invention relates to inhibiting angiogenesis in a subject, comprising
CC   administering at least one antiangiogenic nucleic acid molecule.
CC   Also included is a kit comprising a first container housing the
CC   antiangiogenic nucleic acids, and instructions for administering them to
CC   a subject having a condition characterised by unwanted angiogenesis.
CC   The method is useful for inhibiting angiogenesis associated with solid
CC   tumour growth, tumour metastasis, precancerous lesion, rheumatoid
CC   arthritis, psoriasis, diabetic retinopathy, retinopathy of prematurity,
CC   macular degeneration, corneal graft rejection, neovascular glaucoma,
CC   retrolental fibroplasia, rubeosis, Osler-Webber Syndrome, myocardial
CC   angiogenesis, plaque neovascularisation, telangiectasia, haemophiliac
CC   joints, angiofibroma, wound granulation, intestinal adhesions,
CC   atherosclerosis, scleroderma and hypertrophic scars. The present
CC   sequence is an antiangiogenic nucleic acid of the invention.
XX
SQ   Sequence 20 BP; 3 A; 7 C; 4 G; 6 T; 0 other;

  Query Match             100.0%;  Score 12;  DB 24;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 2.9e+02;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db          9 TGCAGCGTTCTC 20


RESULT 8
ABK46453
ID   ABK46453 standard; DNA; 20 BP.
XX
AC   ABK46453;
XX
DT   05-JUN-2002  (first entry)
XX
DE   Immunostimulatory unmethylated CpG oligodideoxynucleotide #43.
XX
KW   unmethylated CpG; oligdideoxynucleotide; ODN; virucide; vaccine;
KW   Paramyxoviridae; F protein; respiratory syncytial virus; RSV;
KW   viral bronchiolitis; pneumonia; infectious pulmonary disease;
KW   bronchopulmonary dysplasia; congenital heart condition; ss.
XX
OS   Synthetic.
XX
PN   WO200211761-A2.
XX
PD   14-FEB-2002.
XX
PF   09-AUG-2001; 2001WO-US41633.
XX
PR   10-AUG-2000; 2000US-224011P.
PR   01-SEP-2000; 2000US-229307P.
XX
PA   (JACK-) JACKSON FOUND ADVANCEMENT MILITARY MED.
XX
PI   Mond JJ,  Prince G,  Klinman DM;
XX
DR   WPI; 2002-227118/28.
XX
PT   Vaccine for immunising patient against respiratory syncytial virus, has
PT   epitopes of Paramyxoviridae F protein, and cytosine followed by guanine
PT   linked by phosphate bond-oligodideoxynucleotides  -
XX
PS   Claim 4; Page 8; 30pp; English.
XX
CC   The invention describes a vaccine comprising one or more epitopes of a
CC   Paramyxoviridae F protein, and one or more CpG (cytosine followed by
CC   guanine linked by phosphate bond)-oligodideoxynucleotides (ODNs). The
CC   vaccine is useful for vaccinating a patient especially against viruses
CC   of the Paramyxoviridae family e.g. respiratory syncytial virus (RSV),
CC   the primary cause of viral bronchiolitis and pneumonia in infants and
CC   children, and infectious pulmonary disease in infants. RSV has been
CC   particularly implicated in death of infants that are premature, have
CC   bronchopulmonary dysplasia, or congenital heart conditions. This
CC   sequence represents an oligodideoxynucleotide that can be used in the
CC   creation of the vaccine.
XX
SQ   Sequence 20 BP; 3 A; 7 C; 4 G; 6 T; 0 other;

  Query Match             100.0%;  Score 12;  DB 24;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 2.9e+02;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db          9 TGCAGCGTTCTC 20


RESULT 9
ABL38734
ID   ABL38734 standard; DNA; 20 BP.
XX
AC   ABL38734;
XX
DT   16-APR-2002  (first entry)
XX
DE   Immunostimulatory nucleic acid SEQ ID NO: 102.
XX
KW   Antibody-induced cell lysis; cancer; immunostimulatory; CD20;
KW   angiogenesis; metastasis; cytostatic; ss.
XX
OS   Synthetic.
XX
PN   WO200197843-A2.
```

XX
PD 27-DEC-2001.
XX
PF 22-JUN-2001; 2001WO-US20154.
XX
PR 22-JUN-2000; 2000US-213346P.
XX
PA (IOWA) UNIV IOWA RES FOUND.
XX
PI Weiner G, Hartmann G;
XX
DR WPI; 2002-154611/20.
XX
PT Treating or preventing cancer, such as basal cell carcinoma, comprises
PT administering immunostimulatory nucleic acids that induce expression of
PT cell surface antigens and antibodies to a subject having or at risk of
PT developing cancer -
XX
PS Disclosure; Page 120; 312pp; English.
XX
CC The present invention relates to methods for treating or preventing
CC cancer, involving administering to a subject having or at risk of
CC developing cancer immunostimulatory nucleic acids that induce expression
CC of cell surface antigens and antibodies. The methods are useful for
CC treating or preventing cancer such as basal cell carcinoma, bladder
CC cancer, bone cancer, brain and central nervous system (CNS) cancer,
CC breast cancer, cervical cancer, colon and rectum cancer, connective
CC tissue cancer, oesophageal cancer, eye cancer, kidney cancer, larynx
CC cancer, leukaemia, liver cancer, lung cancer, Hodgkin's lymphoma,
CC non-Hodgkin's lymphoma, melanoma, myeloma, oral cavity cancer, ovarian
CC cancer, pancreatic cancer, prostate cancer, rhabdomyosarcoma, skin
CC cancer, stomach cancer, testicular cancer, and uterine cancer. The
CC present sequence is an immunostimulatory oligonucleotide described in
CC the exemplification of the invention.
XX
SQ Sequence 20 BP; 3 A; 7 C; 4 G; 6 T; 0 other;

Query Match 100.0%; Score 12; DB 24; Length 20;
Best Local Similarity 100.0%; Pred. No. 2.9e+02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TGCAGCGTTCTC 12
||||||||||||
Db 9 TGCAGCGTTCTC 20

RESULT 10
AAA52687
ID AAA52687 standard; DNA; 38 BP.
XX
AC AAA52687;
XX
DT 03-JAN-2001 (first entry)
XX
DE Escherichia coli yggA gene PCR primer #2.
XX
KW E. coli; yggA gene; amino acid production; excretion protein gene;
KW PCR primer; ss.
XX
OS Escherichia coli.
XX
PN EP1016710-A2.
XX
PD 05-JUL-2000.
XX
PF 17-DEC-1999; 99EP-0125263.
XX
PR 30-DEC-1998; 98RU-0124016.
PR 09-MAR-1999; 99RU-0104431.
XX
PA (AJIN) AJINOMOTO CO INC.
XX
PI Livshits VA, Zakataeva NP, Nakanishi K, Aleshin VV, Troshin PV;
PI Tokhmakova IL;
XX
DR WPI; 2000-414802/36.
XX
PT Increased production of L-amino acids by an Escherichia bacterium
PT comprises increasing the expression amount of an L-amino acid excretion
PT protein -
XX
PS Example 1; Page 17; 29pp; English.
XX
CC The present sequence is a PCR primer for the yggA gene (an excretion
CC protein gene) of Escherichia coli. The protein produced from this gene is
CC involved in the production of amino acids, and an increase in its
CC expression leads to an increased accumulation of amino acids in the cell.
CC In this case, an increase in arginine, glutamic acid and lysine is
CC achieved if multiple copies of the gene are transfected into a bacterium.
CC The bacterium used is E. coli.
XX
SQ Sequence 38 BP; 7 A; 12 C; 10 G; 9 T; 0 other;

Query Match 100.0%; Score 12; DB 21; Length 38;
Best Local Similarity 100.0%; Pred. No. 2.8e+02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TGCAGCGTTCTC 12
||||||||||||
Db 8 TGCAGCGTTCTC 19

RESULT 11
AAX21528/c
ID AAX21528 standard; DNA; 88 BP.
XX
AC AAX21528;
XX
DT 13-MAY-1999 (first entry)
XX
DE Vector pZT7#3.3 constructing 5-3' oligomer #3.
XX
KW Monocyte chemoattractant protein-1; MCP-1; analogue; inflammatory;
KW rheumatoid arthritis; glomerular nephritides; lung fibrosis; restenosis;
KW alveolitis; asthma; atherosclerosis; psoriasis; hypersensitivity; skin;
KW inflammatory bowel disease; multiple sclerosis; brain tumour; stroke;
KW reperfusion injury; ischemia; myocardial infarction; medicament;
KW PCR primer; ss.
XX
OS Synthetic.
OS Homo sapiens.
XX
PN WO9905279-A1.
XX
PD 04-FEB-1999.
XX
PF 21-JUL-1998; 98WO-GB02179.
XX
PR 25-JUL-1997; 97GB-0015663.
PR 25-JUL-1997; 97GB-0015659.
PR 25-JUL-1997; 97GB-0015661.
XX
PA (ZENE) ZENECA LTD.
XX
PI Barratt DG, Needham MRC;
XX
DR WPI; 1999-142934/12.
XX
PT New analogues of Monocyte Chemoattractant Protein-1 (MCP-1) - useful
PT to treat inflammatory diseases
XX
PS Examples; Page 22; 49pp; English.
XX
CC The invention relates to novel analogues ([V9A]MCP1(9-76), [V9G]MCP1
CC (9-76) and [V9T]MCP1(9-76)) of monocyte chemoattractant protein-1 (MCP-1)
CC having substitution of an Ala, Gly or Thr for the natural Val at position

```
CC   9 of full-length MCP-1. Host cells containing a vector comprising the
CC   nucleic acids encoding the analogues are used for recombinant expression
CC   of the proteins. MCP-1 is implicated in  inflammatory diseases including
CC   rheumatoid arthritis, glomerular nephritides, lung fibrosis, restenosis,
CC   alveolitis, and asthma, and in atherosclerosis, psoriasis, delayed-type
CC   hypersensitivity reactions of the skin, inflammatory bowel disease,
CC   multiple sclerosis, and brain tumour.  An MCP-1 inhibitor may be useful
CC   to treat stroke, reperfusion injury, ischemia, myocardial infarction,
CC   and transplant rejection. The analogues can be used as medicaments.
XX
SQ   Sequence 88 BP; 29 A; 20 C; 18 G; 21 T; 0 other;

  Query Match             100.0%;  Score 12;  DB 20;  Length 88;
  Best Local Similarity   100.0%;  Pred. No. 2.7e+02;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db         65 TGCAGCGTTCTC 54


RESULT 12
AAX21529
ID   AAX21529 standard; DNA; 88 BP.
XX
AC   AAX21529;
XX
DT   13-MAY-1999  (first entry)
XX
DE   Vector pZT7#3.3 constructing 3-5' oligomer #4.
XX
KW   Monocyte chemoattractant protein-1; MCP-1; analogue; inflammatory;
KW   rheumatoid arthritis; glomerular nephritides; lung fibrosis; restenosis;
KW   alveolitis; asthma; atherosclerosis; psoriasis; hypersensitivity; skin;
KW   inflammatory bowel disease; multiple sclerosis; brain tumour; stroke;
KW   reperfusion injury; ischemia; myocardial infarction; medicament;
KW   PCR primer; ss.
XX
OS   Synthetic.
OS   Homo sapiens.
XX
PN   WO9905279-A1.
XX
PD   04-FEB-1999.
XX
PF   21-JUL-1998;   98WO-GB02179.
XX
PR   25-JUL-1997;   97GB-0015663.
PR   25-JUL-1997;   97GB-0015659.
PR   25-JUL-1997;   97GB-0015661.
XX
PA   (ZENE ) ZENECA LTD.
XX
PI   Barratt DG,  Needham MRC;
XX
DR   WPI; 1999-142934/12.
XX
PT   New analogues of Monocyte Chemoattractant Protein-1 (MCP-1) - useful
PT   to treat inflammatory diseases
XX
PS   Examples; Page 22; 49pp; English.
XX
CC   The invention relates to novel analogues ([V9A]MCP1(9-76), [V9G]MCP1
CC   (9-76) and [V9T]MCP1(9-76)) of monocyte chemoattractant protein-1 (MCP-1)
CC   having substitution of an Ala, Gly or Thr for the natural Val at position
CC   9 of full-length MCP-1. Host cells containing a vector comprising the
CC   nucleic acids encoding the analogues are used for recombinant expression
CC   of the proteins. MCP-1 is implicated in  inflammatory diseases including
CC   rheumatoid arthritis, glomerular nephritides, lung fibrosis, restenosis,
CC   alveolitis, and asthma, and in atherosclerosis, psoriasis, delayed-type
CC   hypersensitivity reactions of the skin, inflammatory bowel disease,
CC   multiple sclerosis, and brain tumour.  An MCP-1 inhibitor may be useful
CC   to treat stroke, reperfusion injury, ischemia, myocardial infarction,
CC   and transplant rejection. The analogues can be used as medicaments.
XX
SQ   Sequence 88 BP; 20 A; 19 C; 21 G; 28 T; 0 other;

  Query Match             100.0%;  Score 12;  DB 20;  Length 88;
  Best Local Similarity   100.0%;  Pred. No. 2.7e+02;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db         28 TGCAGCGTTCTC 39


RESULT 13
AAL02385
ID   AAL02385 standard; cDNA; 177 BP.
XX
AC   AAL02385;
XX
DT   21-NOV-2001  (first entry)
XX
DE   Human reproductive system related antigen cDNA SEQ ID NO: 2386.
XX
KW   Human; reproductive system related antigen; reproductive system disorder;
KW   cancer; gene therapy; ss.
XX
OS   Homo sapiens.
XX
PN   WO200155320-A2.
XX
PD   02-AUG-2001.
XX
PF   17-JAN-2001; 2001WO-US01339.
XX
PR   31-JAN-2000; 2000US-0179065.
PR   04-FEB-2000; 2000US-0180628.
PR   24-FEB-2000; 2000US-0184664.
PR   02-MAR-2000; 2000US-0186350.
PR   16-MAR-2000; 2000US-0189874.
PR   17-MAR-2000; 2000US-0190076.
PR   18-APR-2000; 2000US-0198123.
PR   19-MAY-2000; 2000US-0205515.
PR   07-JUN-2000; 2000US-0209467.
PR   28-JUN-2000; 2000US-0214886.
PR   30-JUN-2000; 2000US-0215135.
PR   07-JUL-2000; 2000US-0216647.
PR   07-JUL-2000; 2000US-0216880.
PR   11-JUL-2000; 2000US-0217487.
PR   11-JUL-2000; 2000US-0217496.
PR   14-JUL-2000; 2000US-0218290.
PR   26-JUL-2000; 2000US-0220963.
PR   26-JUL-2000; 2000US-0220964.
PR   14-AUG-2000; 2000US-0224518.
PR   14-AUG-2000; 2000US-0224519.
PR   14-AUG-2000; 2000US-0225213.
PR   14-AUG-2000; 2000US-0225214.
PR   14-AUG-2000; 2000US-0225266.
PR   14-AUG-2000; 2000US-0225267.
PR   14-AUG-2000; 2000US-0225268.
PR   14-AUG-2000; 2000US-0225270.
PR   14-AUG-2000; 2000US-0225447.
PR   14-AUG-2000; 2000US-0225757.
PR   14-AUG-2000; 2000US-0225758.
PR   14-AUG-2000; 2000US-0225759.
PR   18-AUG-2000; 2000US-0226279.
PR   22-AUG-2000; 2000US-0226681.
PR   22-AUG-2000; 2000US-0226868.
PR   22-AUG-2000; 2000US-0227182.
PR   23-AUG-2000; 2000US-0227009.
PR   30-AUG-2000; 2000US-0228924.
PR   01-SEP-2000; 2000US-0229287.
PR   01-SEP-2000; 2000US-0229343.
PR   01-SEP-2000; 2000US-0229344.
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PR 01-SEP-2000; 2000US-0229345.
PR 05-SEP-2000; 2000US-0229509.
PR 05-SEP-2000; 2000US-0229513.
PR 06-SEP-2000; 2000US-0230437.
PR 06-SEP-2000; 2000US-0230438.
PR 08-SEP-2000; 2000US-0231242.
PR 08-SEP-2000; 2000US-0231243.
PR 08-SEP-2000; 2000US-0231244.
PR 08-SEP-2000; 2000US-0231413.
PR 08-SEP-2000; 2000US-0231414.
PR 08-SEP-2000; 2000US-0232080.
PR 08-SEP-2000; 2000US-0232081.
PR 12-SEP-2000; 2000US-0231968.
PR 14-SEP-2000; 2000US-0232397.
PR 14-SEP-2000; 2000US-0232398.
PR 14-SEP-2000; 2000US-0232399.
PR 14-SEP-2000; 2000US-0232400.
PR 14-SEP-2000; 2000US-0232401.
PR 14-SEP-2000; 2000US-0233063.
PR 14-SEP-2000; 2000US-0233064.
PR 14-SEP-2000; 2000US-0233065.
PR 21-SEP-2000; 2000US-0234223.
PR 21-SEP-2000; 2000US-0234274.
PR 25-SEP-2000; 2000US-0234997.
PR 25-SEP-2000; 2000US-0234998.
PR 26-SEP-2000; 2000US-0235484.
PR 27-SEP-2000; 2000US-0235834.
PR 27-SEP-2000; 2000US-0235836.
PR 29-SEP-2000; 2000US-0236327.
PR 29-SEP-2000; 2000US-0236367.
PR 29-SEP-2000; 2000US-0236368.
PR 29-SEP-2000; 2000US-0236369.
PR 29-SEP-2000; 2000US-0236370.
PR 02-OCT-2000; 2000US-0236802.
PR 02-OCT-2000; 2000US-0237037.
PR 02-OCT-2000; 2000US-0237038.
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PR 02-OCT-2000; 2000US-0237040.
PR 13-OCT-2000; 2000US-0239935.
PR 13-OCT-2000; 2000US-0239937.
PR 20-OCT-2000; 2000US-0240960.
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PR 20-OCT-2000; 2000US-0241787.
PR 20-OCT-2000; 2000US-0241808.
PR 20-OCT-2000; 2000US-0241809.
PR 20-OCT-2000; 2000US-0241826.
PR 01-NOV-2000; 2000US-0244617.
PR 08-NOV-2000; 2000US-0246474.
PR 08-NOV-2000; 2000US-0246475.
PR 08-NOV-2000; 2000US-0246476.
PR 08-NOV-2000; 2000US-0246477.
PR 08-NOV-2000; 2000US-0246478.
PR 08-NOV-2000; 2000US-0246523.
PR 08-NOV-2000; 2000US-0246524.
PR 08-NOV-2000; 2000US-0246525.
PR 08-NOV-2000; 2000US-0246526.
PR 08-NOV-2000; 2000US-0246527.
PR 08-NOV-2000; 2000US-0246528.
PR 08-NOV-2000; 2000US-0246532.
PR 08-NOV-2000; 2000US-0246609.
PR 08-NOV-2000; 2000US-0246610.
PR 08-NOV-2000; 2000US-0246611.
PR 08-NOV-2000; 2000US-0246613.
PR 17-NOV-2000; 2000US-0249207.
PR 17-NOV-2000; 2000US-0249208.
PR 17-NOV-2000; 2000US-0249209.
PR 17-NOV-2000; 2000US-0249210.
PR 17-NOV-2000; 2000US-0249211.
PR 17-NOV-2000; 2000US-0249212.
PR 17-NOV-2000; 2000US-0249213.
PR 17-NOV-2000; 2000US-0249214.
PR 17-NOV-2000; 2000US-0249215.
PR 17-NOV-2000; 2000US-0249216.
PR 17-NOV-2000; 2000US-0249217.
PR 17-NOV-2000; 2000US-0249218.
PR 17-NOV-2000; 2000US-0249244.
PR 17-NOV-2000; 2000US-0249245.
PR 17-NOV-2000; 2000US-0249264.
PR 17-NOV-2000; 2000US-0249265.
PR 17-NOV-2000; 2000US-0249297.
PR 17-NOV-2000; 2000US-0249299.
PR 17-NOV-2000; 2000US-0249300.
PR 01-DEC-2000; 2000US-0250160.
PR 01-DEC-2000; 2000US-0250391.
PR 05-DEC-2000; 2000US-0251030.
PR 05-DEC-2000; 2000US-0251988.
PR 05-DEC-2000; 2000US-0256719.
PR 06-DEC-2000; 2000US-0251479.
PR 08-DEC-2000; 2000US-0251856.
PR 08-DEC-2000; 2000US-0251868.
PR 08-DEC-2000; 2000US-0251869.
PR 08-DEC-2000; 2000US-0251989.
PR 08-DEC-2000; 2000US-0251990.
PR 11-DEC-2000; 2000US-0254097.
PR 05-JAN-2001; 2001US-0259678.
XX
PA (HUMA-) HUMAN GENOME SCI INC.
XX
PI Rosen CA, Barash SC, Ruben SM;
XX
DR WPI; 2001-465570/50.
DR P-PSDB; AAM96415.
XX
PT Isolated nucleic acid molecule encoding a reproductive system antigen
PT is used in preventing, treating or ameliorating a medical condition -
XX
PS Claim 1; SEQ ID NO 2386; 1297pp + Sequence Listing; English.
XX
CC The present invention provides the protein and coding sequences of a
CC number of human reproductive system related antigens. These can be used
CC in the prevention and treatment of reproductive system disorders,
CC including cancer. The present sequence is a coding sequence of the
CC invention.
XX
SQ Sequence 177 BP; 26 A; 54 C; 33 G; 61 T; 3 other;

Query Match 100.0%; Score 12; DB 22; Length 177;
Best Local Similarity 100.0%; Pred. No. 2.6e+02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TGCAGCGTTCTC 12
||||||||||||
Db 73 TGCAGCGTTCTC 84

RESULT 14
ABN76325/c
ID ABN76325 standard; cDNA; 252 BP.
XX
AC ABN76325;
XX
DT 08-JUL-2002 (first entry)
XX
DE Human transcription factor-like ORF1272 cDNA, SEQ ID NO:2543.
XX
KW Human; ORF; open reading frame; ORFX; drug screening; diagnosis;
KW disease monitoring; cytokine; cell proliferation; cell differentiation;
KW immune modulation; haematopoiesis regulation; tissue growth;
KW angiogenesis; activin; inhibin; chemotactic; chemokinetic; haemostatic;
KW thrombolytic; tumour inhibition; bodily characteristic; fertility;
KW behaviour; cancer; proliferative disorder; neurological disorder;
KW cardiovascular disease; immune system disorder; organ transplantation;
KW tissue growth disorder; tissue regeneration disorder; diabetes mellitus;
KW hypothyroidism; cholesterol ester storage disease; infection; vulnerary;

```
KW   vasotropic; antipsoriatic; antidiabetic; cytostatic; nootropic;
KW   neuroprotective; antiatherosclerotic; anticoagulant; thrombolytic;
KW   cardiant; hypotensive; antithyroid; antiinflammatory; immunomodulator;
KW   dermatological; analgesic; virucide; antibacterial; fungicide; gene; ss.
XX
OS   Homo sapiens.
XX
PN   WO200190366-A2.
XX
PD   29-NOV-2001.
XX
PF   24-MAY-2001; 2001WO-US17076.
XX
PR   24-MAY-2000; 2000US-206690P.
XX
PA   (CURA-) CURAGEN CORP.
XX
PI   Leach MD,  Shimkets RA;
XX
DR   WPI; 2002-106200/14.
DR   P-PSDB; ABP32299.
XX
PT   Novel human polypeptides and polynucleotides useful for diagnosing,
PT   preventing and treating cardiovascular disease, neurodegenerative,
PT   hyperproliferative disorders and disorders related to organ
PT   transplantation -
XX
PS   Claim 1; Page 896; 2508pp; English.
XX
CC   Sequences ABP31028-ABP35561 represent 4534 novel human proteins
CC   designated ORF (open reading frame) 1-4534, and sequences ABN75054-
CC   ABN79587 represent cDNAs encoding them. The invention also encompasses
CC   polypeptides at least 80% identical to the ORF1-ORF4534 (collectively
CC   referred to as ORFX) proteins, polynucleotides at least 85% identical to
CC   the ORFX nucleic acid sequences, vectors and host cells comprising ORFX
CC   polynucleotides, the recombinant production of ORFX proteins, antibodies
CC   specific for ORFX proteins, methods of detecting ORFX polynucleotides and
CC   polypeptides, methods of screening for modulators of ORFX expression or
CC   activity, and methods of screening individuals for a predisposition to an
CC   ORFX-associated disorder. The ORFX proteins of the invention have a wide
CC   range of biological activities, such as cytokine, cell proliferation,
CC   cell differentiation, immune modulation, haematopoiesis regulation,
CC   tissue growth, angiogenesis, activin or inhibin activity, chemotactic/
CC   chemokinetic activity, haemostatic activity, thrombolytic activity,
CC   receptor/ligand, antiinflammatory activity, tumour inhibition activity,
CC   and antiinfective activity, and may also be involved in the determination
CC   of bodily characteristics, fertility and behaviour. ORFX proteins,
CC   nucleic acids and antibodies may be used in the treatment of cancers,
CC   other proliferative disorders such as psoriasis and benign tumours,
CC   neurological disorders such as epilepsy and Alzheimer's disease,
CC   cardiovascular diseases, immune system disorders, disorders related to
CC   organ transplantation, disorders of tissue growth and regeneration,
CC   diseases such as diabetes mellitus, hypothyroidism, and cholesterol ester
CC   storage disease, and infectious diseases caused by viral, bacterial,
CC   fungal and other pathogens. ORFX nucleic acids may also be used as a
CC   source of primers and probes, in the detection of ORFX genomic sequences
CC   or transcripts, in the identification and cloning of homologous
CC   sequences, in genetic diagnosis, and in forensic biology. The ORFX
CC   nucleic acids may additionally be used to produce transgenic animals
CC   which may be useful for studying the function and/or activity of ORFX
CC   protein, and in drug screening. The ORFX proteins may also be used as
CC   immunogens to generate specific antibodies, which are useful in the
CC   diagnosis, treatment and monitoring of ORFX-associated diseases.
XX
SQ   Sequence 252 BP; 74 A; 50 C; 63 G; 65 T; 0 other;

  Query Match            100.0%;  Score 12;  DB 24;  Length 252;
  Best Local Similarity  100.0%;  Pred. No. 2.5e+02;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db        195 TGCAGCGTTCTC 184
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RESULT 15
AAX37307/c
ID   AAX37307 standard; DNA; 254 BP.
XX
AC   AAX37307;
XX
DT   05-JUL-1999  (first entry)
XX
DE   Human breast-specific BS200 DNA EST clone 3213801.
XX
KW   Breast; cancer; BS200; EST; expressed sequence tag; human; detection;
KW   diagnosis; prevention; treatment; disease predisposition; ss.
XX
OS   Homo sapiens.
XX
PN   WO9902714-A1.
XX
PD   21-JAN-1999.
XX
PF   07-JUL-1998;   98WO-US13908.
XX
PR   07-JUL-1997;   97US-0889127.
XX
PA   (ABBO ) ABBOTT LAB.
XX
PI   Billing-Medel PA,  Cohen M,  Colpitts TL,  Friedman PN;
PI   Gordon J,  Granados EN,  Hodges SC,  Klass MR,  Kratochvil JD;
PI   Russell JC,  Stroupe SD,  Yu H;
XX
DR   WPI; 1999-120915/10.
XX
PT   New breast specific gene BS200 - used to develop products for
PT   detecting, diagnosing, staging, preventing or treating diseases or
PT   conditions of the breast, e.g. breast cancer
XX
PS   Claim 1b; Page 108; 124pp; English.
XX
CC   This invention describes a novel human breast-specific protein BS200.
CC   This protein and its encoding nucleic acids are useful for detecting,
CC   diagnosing, staging, monitoring, prognosticating, preventing or
CC   treating, or determining predisposition to diseases or conditions of the
CC   breast, such as breast cancer. AAX37305-X37320 are expressed sequence
CC   tags (EST's) used in the method of the invention.
XX
SQ   Sequence 254 BP; 71 A; 67 C; 70 G; 46 T; 0 other;

  Query Match            100.0%;  Score 12;  DB 20;  Length 254;
  Best Local Similarity  100.0%;  Pred. No. 2.5e+02;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db        216 TGCAGCGTTCTC 205


Search completed: January 20, 2004, 18:51:37
Job time : 74.9412 secs
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GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: January 20, 2004, 17:24:48 ; Search time 18.8824 Seconds
(without alignments)
280.505 Million cell updates/sec

Title: US-10-068-160-74
Perfect score: 12
Sequence: 1 tgcagcgttctc 12

Scoring table: OLIGO_NUC
Gapop 60.0 , Gapext 60.0

Searched: 569978 seqs, 220691566 residues

Word size : 0

Total number of hits satisfying chosen parameters: 955846

Minimum DB seq length: 0
Maximum DB seq length: 500

Post-processing: Listing first 45 summaries

Database : Issued_Patents_NA:*
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6: /cgn2_6/ptodata/2/ina/backfiles1.seq:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
c 1	12	100.0	88	4	US-09-463-458A-12	Sequence 12, Appl
2	12	100.0	88	4	US-09-463-458A-13	Sequence 13, Appl
c 3	12	100.0	88	4	US-09-463-451-3	Sequence 3, Appli
4	12	100.0	88	4	US-09-463-451-4	Sequence 4, Appli
c 5	12	100.0	417	4	US-09-134-001C-854	Sequence 854, App
c 6	12	100.0	421	4	US-09-404-879A-157	Sequence 157, App
c 7	12	100.0	421	4	US-09-338-933-157	Sequence 157, App
c 8	12	100.0	421	4	US-09-215-681-157	Sequence 157, App
c 9	11	91.7	291	4	US-09-184-418C-31	Sequence 31, Appl
10	11	91.7	417	4	US-09-134-001C-1044	Sequence 1044, Ap
11	11	91.7	426	4	US-09-174-943-5	Sequence 5, Appli
12	11	91.7	435	4	US-09-252-991A-584	Sequence 584, App
13	11	91.7	444	4	US-09-252-991A-2053	Sequence 2053, Ap
c 14	11	91.7	489	4	US-09-252-991A-14631	Sequence 14631, A
c 15	10	83.3	20	1	US-08-436-714-5	Sequence 5, Appli
c 16	10	83.3	20	1	US-08-442-705-5	Sequence 5, Appli
c 17	10	83.3	20	1	US-08-332-829-5	Sequence 5, Appli
18	10	83.3	20	2	US-09-044-506A-48	Sequence 48, Appl
19	10	83.3	20	3	US-08-386-063-7	Sequence 7, Appli
c 20	10	83.3	20	3	US-08-386-063-13	Sequence 13, Appl
c 21	10	83.3	20	3	US-08-386-063-18	Sequence 18, Appl
22	10	83.3	20	3	US-08-386-063-7	Sequence 7, Appli
c 23	10	83.3	20	3	US-08-386-063-13	Sequence 13, Appl
c 24	10	83.3	20	3	US-08-386-063-18	Sequence 18, Appl
25	10	83.3	20	3	US-08-738-652-17	Sequence 17, Appl
c 26	10	83.3	20	3	US-08-738-652-23	Sequence 23, Appl
c 27	10	83.3	20	3	US-08-738-652-27	Sequence 27, Appl
c 28	10	83.3	20	3	US-08-738-652-28	Sequence 28, Appl
c 29	10	83.3	20	3	US-09-030-701-20	Sequence 20, Appl
30	10	83.3	20	3	US-09-286-098-6	Sequence 6, Appli
c 31	10	83.3	20	3	US-09-286-098-12	Sequence 12, Appl
c 32	10	83.3	20	3	US-09-286-098-17	Sequence 17, Appl
33	10	83.3	20	3	US-09-286-098-35	Sequence 35, Appl
34	10	83.3	20	3	US-08-960-774-1	Sequence 1, Appli
c 35	10	83.3	20	3	US-08-960-774-20	Sequence 20, Appl
c 36	10	83.3	20	3	US-08-960-774-25	Sequence 25, Appl
37	10	83.3	20	4	US-09-325-193A-6	Sequence 6, Appli
c 38	10	83.3	20	4	US-09-325-193A-11	Sequence 11, Appl
c 39	10	83.3	20	4	US-09-325-193A-14	Sequence 14, Appl
40	10	83.3	20	4	US-09-325-193A-29	Sequence 29, Appl
41	10	83.3	20	4	US-09-191-170-6	Sequence 6, Appli
c 42	10	83.3	20	4	US-09-191-170-12	Sequence 12, Appl
c 43	10	83.3	20	4	US-09-191-170-16	Sequence 16, Appl
c 44	10	83.3	20	4	US-09-191-170-17	Sequence 17, Appl
45	10	83.3	20	4	US-09-191-170-35	Sequence 35, Appl

ALIGNMENTS

RESULT 1
US-09-463-458A-12/c
; Sequence 12, Application US/09463458A
; Patent No. 6383782
; GENERAL INFORMATION:
; APPLICANT: Barratt, Derek G
; APPLICANT: Needham, Maurice R.C.
; TITLE OF INVENTION: MCP-1 ANALOGS
; FILE REFERENCE: 1991-186
; CURRENT APPLICATION NUMBER: US/09/463,458A
; CURRENT FILING DATE: 2000-01-27
; PRIOR APPLICATION NUMBER: PCT/GB98/02179
; PRIOR FILING DATE: 1998-07-21
; NUMBER OF SEQ ID NOS: 32
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 12
; LENGTH: 88
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: 5'-3' oligomer
; OTHER INFORMATION: #3
US-09-463-458A-12

Query Match 100.0%; Score 12; DB 4; Length 88;
Best Local Similarity 100.0%; Pred. No. 44;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 TGCAGCGTTCTC 12
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Db         65 TGCAGCGTTCTC 54
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RESULT 2
US-09-463-458A-13
; Sequence 13, Application US/09463458A
; Patent No. 6383782
; GENERAL INFORMATION:
; APPLICANT: Barratt, Derek G
; APPLICANT: Needham, Maurice R.C.
; TITLE OF INVENTION: MCP-1 ANALOGS
; FILE REFERENCE: 1991-186
; CURRENT APPLICATION NUMBER: US/09/463,458A
; CURRENT FILING DATE: 2000-01-27
; PRIOR APPLICATION NUMBER: PCT/GB98/02179
; PRIOR FILING DATE: 1998-07-21
; NUMBER OF SEQ ID NOS: 32
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 13
; LENGTH: 88

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;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: 3'-5' oligomer
;   OTHER INFORMATION: #4
US-09-463-458A-13

  Query Match             100.0%;  Score 12;  DB 4;  Length 88;
  Best Local Similarity   100.0%;  Pred. No. 44;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db         28 TGCAGCGTTCTC 39


RESULT 3
US-09-463-451-3/c
; Sequence 3, Application US/09463451
; Patent No. 6537779
;   GENERAL INFORMATION:
;        APPLICANT: KARA, Buhpendra V.
;                   PIOLI, David
;                   BUNDELL, Kenneth R.
;                   HOCKNEY, Robert C.
;        TITLE OF INVENTION: T7 Promoter-Based Expression System
;        NUMBER OF SEQUENCES: 32
;        CORRESPONDENCE ADDRESS:
;             ADDRESSEE: Pillsbury Madison & Sutro, L.L.P.
;             STREET: 1100 New York Avenue, N.W.
;             CITY: Washington
;             STATE: D.C.
;             COUNTRY: USA
;             ZIP: 20005-3918
;        COMPUTER READABLE FORM:
;             MEDIUM TYPE: Floppy disk
;             COMPUTER: IBM PC compatible
;             OPERATING SYSTEM: PC-DOS/MS-DOS
;             SOFTWARE: MS Word
;        CURRENT APPLICATION DATA:
;             APPLICATION NUMBER: US/09/463,451
;             FILING DATE: 03-Apr-2000
;             CLASSIFICATION: <Unknown>
;        PRIOR APPLICATION DATA:
;             APPLICATION NUMBER: PCT/GB98/02175
;             FILING DATE: 21-JUL-1998
;             APPLICATION NUMBER: GB 9715660.8
;             FILING DATE: 25-JUL-1997
;   INFORMATION FOR SEQ ID NO: 3:
;        SEQUENCE CHARACTERISTICS:
;             LENGTH: 88 base pairs
;             TYPE: nucleic acid
;             STRANDEDNESS: single
;             TOPOLOGY: linear
;        MOLECULE TYPE: other nucleic acid
;        SEQUENCE DESCRIPTION: SEQ ID NO: 3:
US-09-463-451-3

  Query Match             100.0%;  Score 12;  DB 4;  Length 88;
  Best Local Similarity   100.0%;  Pred. No. 44;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db         65 TGCAGCGTTCTC 54


RESULT 4
US-09-463-451-4
; Sequence 4, Application US/09463451
; Patent No. 6537779
;   GENERAL INFORMATION:
;        APPLICANT: KARA, Buhpendra V.
;                   PIOLI, David
;                   BUNDELL, Kenneth R.
;                   HOCKNEY, Robert C.
;        TITLE OF INVENTION: T7 Promoter-Based Expression System
;        NUMBER OF SEQUENCES: 32
;        CORRESPONDENCE ADDRESS:
;             ADDRESSEE: Pillsbury Madison & Sutro, L.L.P.
;             STREET: 1100 New York Avenue, N.W.
;             CITY: Washington
;             STATE: D.C.
;             COUNTRY: USA
;             ZIP: 20005-3918
;        COMPUTER READABLE FORM:
;             MEDIUM TYPE: Floppy disk
;             COMPUTER: IBM PC compatible
;             OPERATING SYSTEM: PC-DOS/MS-DOS
;             SOFTWARE: MS Word
;        CURRENT APPLICATION DATA:
;             APPLICATION NUMBER: US/09/463,451
;             FILING DATE: 03-Apr-2000
;             CLASSIFICATION: <Unknown>
;        PRIOR APPLICATION DATA:
;             APPLICATION NUMBER: PCT/GB98/02175
;             FILING DATE: 21-JUL-1998
;             APPLICATION NUMBER: GB 9715660.8
;             FILING DATE: 25-JUL-1997
;   INFORMATION FOR SEQ ID NO: 4:
;        SEQUENCE CHARACTERISTICS:
;             LENGTH: 88 base pairs
;             TYPE: nucleic acid
;             STRANDEDNESS: single
;             TOPOLOGY: linear
;        MOLECULE TYPE: other nucleic acid
;        SEQUENCE DESCRIPTION: SEQ ID NO: 4:
US-09-463-451-4

  Query Match             100.0%;  Score 12;  DB 4;  Length 88;
  Best Local Similarity   100.0%;  Pred. No. 44;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db         28 TGCAGCGTTCTC 39


RESULT 5
US-09-134-001C-854/c
; Sequence 854, Application US/09134001C
; Patent No. 6380370
; GENERAL INFORMATION:
;  APPLICANT: Lynn Doucette-Stamm et al
;  TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO STAPHYLOCOCCUS
;  TITLE OF INVENTION:  EPIDERMIDIS FOR DIAGNOSTICS AND THERAPEUTICS
;  FILE REFERENCE: GTC-007
;  CURRENT APPLICATION NUMBER: US/09/134,001C
;  CURRENT FILING DATE:  1998-08-13
;  PRIOR APPLICATION NUMBER: US 60/064,964
;  PRIOR FILING DATE: 1997-11-08
;  PRIOR APPLICATION NUMBER: US 60/055,779
;  PRIOR FILING DATE: 1997-08-14
;  NUMBER OF SEQ ID NOS: 5674
; SEQ ID NO 854
;   LENGTH: 417
;   TYPE: DNA
;   ORGANISM: Staphylococcus epidermidis
US-09-134-001C-854

  Query Match             100.0%;  Score 12;  DB 4;  Length 417;
  Best Local Similarity   100.0%;  Pred. No. 40;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
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Db        156 TGCAGCGTTCTC 145


RESULT 6
US-09-404-879A-157/c
; Sequence 157, Application US/09404879A
; Patent No. 6468546
; GENERAL INFORMATION:
;  APPLICANT:  Mitcham, Jennifer L.
;  APPLICANT:  King, Gordon E.
;  APPLICANT:  Algate, Paul A.
;  TITLE OF INVENTION:  COMPOSITIONS AND METHODS FOR THE THERAPY AND
;  TITLE OF INVENTION:  DIAGNOSIS OF OVARIAN CANCER
;  FILE REFERENCE:  210121.462C2
;  CURRENT APPLICATION NUMBER: US/09/404,879A
;  CURRENT FILING DATE:  1999-09-24
;  NUMBER OF SEQ ID NOS:  393
;  SOFTWARE:  FastSEQ for Windows Version 3.0
; SEQ ID NO 157
;   LENGTH: 421
;   TYPE: DNA
;   ORGANISM: Homo sapien
US-09-404-879A-157

  Query Match             100.0%;  Score 12;  DB 4;  Length 421;
  Best Local Similarity   100.0%;  Pred. No. 40;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db        318 TGCAGCGTTCTC 307


RESULT 7
US-09-338-933-157/c
; Sequence 157, Application US/09338933
; Patent No. 6488931
; GENERAL INFORMATION:
;  APPLICANT: Mitcham, Jennifer Lynn
;  APPLICANT: King, Gordon E.
;  TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THERAPY OF
;  TITLE OF INVENTION: OVARIAN CANCER
;  FILE REFERENCE: 210121.462C1
;  CURRENT APPLICATION NUMBER: US/09/338,933
;  CURRENT FILING DATE: 1999-06-23
;  NUMBER OF SEQ ID NOS: 312
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 157
;   LENGTH: 421
;   TYPE: DNA
;   ORGANISM: Homo sapien
US-09-338-933-157

  Query Match             100.0%;  Score 12;  DB 4;  Length 421;
  Best Local Similarity   100.0%;  Pred. No. 40;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db        318 TGCAGCGTTCTC 307


RESULT 8
US-09-215-681-157/c
; Sequence 157, Application US/09215681A
; Patent No. 6528253
; GENERAL INFORMATION:
;  APPLICANT: Mitcham, Jennifer L.
;  APPLICANT: Frudakis, Tony N.
;  APPLICANT: King, Gordon E.
;  TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR DIAGNOSIS
;  TITLE OF INVENTION: OF OVARIAN CANCER
;  FILE REFERENCE: 210121.463
;  CURRENT APPLICATION NUMBER: US/09/215,681A
;  CURRENT FILING DATE: 1998-12-17
;  NUMBER OF SEQ ID NOS: 310
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 157
;   LENGTH: 421
;   TYPE: DNA
;   ORGANISM: Homo sapien
US-09-215-681-157

  Query Match             100.0%;  Score 12;  DB 4;  Length 421;
  Best Local Similarity   100.0%;  Pred. No. 40;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db        318 TGCAGCGTTCTC 307


RESULT 9
US-09-184-418C-31/c
; Sequence 31, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
;  APPLICANT: Hahn, Beatrice
;  APPLICANT:  Gao, Feng
;  APPLICANT:  Shaw, George
;  TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
;  TITLE OF INVENTION:  IMMUNODEFICIENCY VIRUS TYPE 1
;  FILE REFERENCE: D6287
;  CURRENT APPLICATION NUMBER: US/09/184,418C
;  CURRENT FILING DATE:  1999-11-02
;  NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 31
;   LENGTH: 291
;   TYPE: DNA
;   ORGANISM: Human immunodeficiency virus type 1
;   FEATURE:
;   OTHER INFORMATION: isolate=90CR056; gene=vpr
US-09-184-418C-31

  Query Match             91.7%;  Score 11;  DB 4;  Length 291;
  Best Local Similarity   100.0%;  Pred. No. 1.7e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCT 11
              |||||||||||
Db        194 TGCAGCGTTCT 184


RESULT 10
US-09-134-001C-1044
; Sequence 1044, Application US/09134001C
; Patent No. 6380370
; GENERAL INFORMATION:
;  APPLICANT: Lynn Doucette-Stamm et al
;  TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO STAPHYLOCOCCUS
;  TITLE OF INVENTION:  EPIDERMIDIS FOR DIAGNOSTICS AND THERAPEUTICS
;  FILE REFERENCE: GTC-007
;  CURRENT APPLICATION NUMBER: US/09/134,001C
;  CURRENT FILING DATE:  1998-08-13
;  PRIOR APPLICATION NUMBER: US 60/064,964
;  PRIOR FILING DATE: 1997-11-08
;  PRIOR APPLICATION NUMBER: US 60/055,779
;  PRIOR FILING DATE: 1997-08-14
;  NUMBER OF SEQ ID NOS: 5674
; SEQ ID NO 1044
;   LENGTH: 417
;   TYPE: DNA
;   ORGANISM: Staphylococcus epidermidis
US-09-134-001C-1044

  Query Match             91.7%;  Score 11;  DB 4;  Length 417;
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```
  Best Local Similarity   100.0%;  Pred. No. 1.7e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCT 11
              ||||||||||| 
Db        300 TGCAGCGTTCT 310


RESULT 11
US-09-174-943-5
; Sequence 5, Application US/09174943
; Patent No. 6420110
; GENERAL INFORMATION:
;  APPLICANT: GYURIS, JENO
;  APPLICANT: MORRIS, AARON J.
;  TITLE OF INVENTION: METHODS AND REAGENTS FOR ISOLATING BIOLOGICALLY ACTIVE
;  TITLE OF INVENTION: PEPTIDES
;  FILE REFERENCE: MIV-106.01
;  CURRENT APPLICATION NUMBER: US/09/174,943
;  CURRENT FILING DATE: 1998-10-19
;  NUMBER OF SEQ ID NOS: 8
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 5
;   LENGTH: 426
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: pAM8 M13/COS
;   OTHER INFORMATION: peptide expression plasmid
;   FEATURE:
;   NAME/KEY: CDS
;   LOCATION: (121)..(324)
US-09-174-943-5

  Query Match             91.7%;  Score 11;  DB 4;  Length 426;
  Best Local Similarity   100.0%;  Pred. No. 1.7e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCT 11
              ||||||||||| 
Db        159 TGCAGCGTTCT 169


RESULT 12
US-09-252-991A-584
; Sequence 584, Application US/09252991A
; Patent No. 6551795
; GENERAL INFORMATION:
;  APPLICANT:  Marc J. Rubenfield et al.
;  TITLE OF INVENTION:  NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
;  TITLE OF INVENTION:  AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
;  FILE REFERENCE:  107196.136
;  CURRENT APPLICATION NUMBER: US/09/252,991A
;  CURRENT FILING DATE:  1999-02-18
;  PRIOR APPLICATION NUMBER:  US 60/074,788
;  PRIOR FILING DATE:  1998-02-18
;  PRIOR APPLICATION NUMBER:  US 60/094,190
;  PRIOR FILING DATE:  1998-07-27
;  NUMBER OF SEQ ID NOS:  33142
; SEQ ID NO 584
;   LENGTH: 435
;   TYPE: DNA
;   ORGANISM: Pseudomonas aeruginosa
US-09-252-991A-584

  Query Match             91.7%;  Score 11;  DB 4;  Length 435;
  Best Local Similarity   100.0%;  Pred. No. 1.7e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 GCAGCGTTCTC 12
              ||||||||||| 
Db        271 GCAGCGTTCTC 281


RESULT 13
US-09-252-991A-2053
; Sequence 2053, Application US/09252991A
; Patent No. 6551795
; GENERAL INFORMATION:
;  APPLICANT:  Marc J. Rubenfield et al.
;  TITLE OF INVENTION:  NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
;  TITLE OF INVENTION:  AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
;  FILE REFERENCE:  107196.136
;  CURRENT APPLICATION NUMBER: US/09/252,991A
;  CURRENT FILING DATE:  1999-02-18
;  PRIOR APPLICATION NUMBER:  US 60/074,788
;  PRIOR FILING DATE:  1998-02-18
;  PRIOR APPLICATION NUMBER:  US 60/094,190
;  PRIOR FILING DATE:  1998-07-27
;  NUMBER OF SEQ ID NOS:  33142
; SEQ ID NO 2053
;   LENGTH: 444
;   TYPE: DNA
;   ORGANISM: Pseudomonas aeruginosa
US-09-252-991A-2053

  Query Match             91.7%;  Score 11;  DB 4;  Length 444;
  Best Local Similarity   100.0%;  Pred. No. 1.7e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 GCAGCGTTCTC 12
              ||||||||||| 
Db        352 GCAGCGTTCTC 362


RESULT 14
US-09-252-991A-14631/c
; Sequence 14631, Application US/09252991A
; Patent No. 6551795
; GENERAL INFORMATION:
;  APPLICANT:  Marc J. Rubenfield et al.
;  TITLE OF INVENTION:  NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
;  TITLE OF INVENTION:  AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
;  FILE REFERENCE:  107196.136
;  CURRENT APPLICATION NUMBER: US/09/252,991A
;  CURRENT FILING DATE:  1999-02-18
;  PRIOR APPLICATION NUMBER:  US 60/074,788
;  PRIOR FILING DATE:  1998-02-18
;  PRIOR APPLICATION NUMBER:  US 60/094,190
;  PRIOR FILING DATE:  1998-07-27
;  NUMBER OF SEQ ID NOS:  33142
; SEQ ID NO 14631
;   LENGTH: 489
;   TYPE: DNA
;   ORGANISM: Pseudomonas aeruginosa
US-09-252-991A-14631

  Query Match             91.7%;  Score 11;  DB 4;  Length 489;
  Best Local Similarity   100.0%;  Pred. No. 1.7e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 GCAGCGTTCTC 12
              ||||||||||| 
Db         19 GCAGCGTTCTC 9


RESULT 15
US-08-436-714-5/c
; Sequence 5, Application US/08436714
; Patent No. 5602244
;  GENERAL INFORMATION:
;    APPLICANT:  Marvin H. Caruthers et al
;    TITLE OF INVENTION:  Nucleoside and Polynucleotide
;    TITLE OF INVENTION:  Thiophosphoramidite and Phosphorodithioate Compounds and Proc
;    NUMBER OF SEQUENCES:  8
;    CORRESPONDENCE ADDRESS:
```

```
;       ADDRESSEE:  Yahwak & Associates
;       STREET:  25 Skytop Drive
;       CITY:  Trumbull
;       STATE:  Connecticut
;       COUNTRY:  USA
;       ZIP:  06611
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  floppy disk
;       COMPUTER:  Macintosh
;       OPERATING SYSTEM:  MS-DOS
;       SOFTWARE:  Microsoft Word 4.0
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/436,714
;       FILING DATE:
;       CLASSIFICATION:  536
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  George M. Yahwak
;       REGISTRATION NUMBER:  26,824
;       REFERENCE/DOCKET NUMBER:  CU 311 BIGCIP
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (203)268-1951
;       TELEFAX:  (203)268-1951
;   INFORMATION FOR SEQ ID NO:  5:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  20 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
;     MOLECULE TYPE:  DNA
US-08-436-714-5

  Query Match             83.3%;  Score 10;  DB 1;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 8.7e+02;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          3 CAGCGTTCTC 12
              ||||||||||
Db         10 CAGCGTTCTC 1


Search completed: January 20, 2004, 20:03:12
Job time : 18.8824 secs
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OM nucleic - nucleic search, using sw model

Run on: January 20, 2004, 18:44:59 ; Search time 79.7647 Seconds
(without alignments)
530.274 Million cell updates/sec

Title: US-10-068-160-74
Perfect score: 12
Sequence: 1 tgcagcgttctc 12

Scoring table: OLIGO_NUC
Gapop 60.0 , Gapext 60.0

Searched: 2324096 seqs, 1762381658 residues

Word size : 0

Total number of hits satisfying chosen parameters: 2392556

Minimum DB seq length: 0
Maximum DB seq length: 500

Post-processing: Listing first 45 summaries

Database : Published_Applications_NA:*
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10: /cgn2_6/ptodata/1/pubpna/US09B_PUBCOMB.seq:*
11: /cgn2_6/ptodata/1/pubpna/US09C_PUBCOMB.seq:*
12: /cgn2_6/ptodata/1/pubpna/US09_NEW_PUB.seq:*
13: /cgn2_6/ptodata/1/pubpna/US09_NEW_PUB.seq2:*
14: /cgn2_6/ptodata/1/pubpna/US10A_PUBCOMB.seq:*
15: /cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
16: /cgn2_6/ptodata/1/pubpna/US10_NEW_PUB.seq:*
17: /cgn2_6/ptodata/1/pubpna/US60_NEW_PUB.seq:*
18: /cgn2_6/ptodata/1/pubpna/US60_PUBCOMB.seq:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	12	100.0	12	13	US-10-194-035-18	Sequence 18, Appl
2	12	100.0	12	15	US-10-068-160-74	Sequence 74, Appl
3	12	100.0	20	11	US-09-888-326-102	Sequence 102, App
4	12	100.0	20	11	US-09-776-479-715	Sequence 715, App
5	12	100.0	20	13	US-10-194-035-25	Sequence 25, Appl
6	12	100.0	20	15	US-10-112-653-688	Sequence 688, App
7	12	100.0	20	15	US-10-017-995-715	Sequence 715, App
8	12	100.0	177	11	US-09-764-891-2386	Sequence 2386, Ap
c 9	12	100.0	238	13	US-10-029-386-23488	Sequence 23488, A
10	12	100.0	258	9	US-09-923-876-6331	Sequence 6331, Ap
11	12	100.0	258	12	US-09-923-876-6331	Sequence 6331, Ap
c 12	12	100.0	375	10	US-09-960-352-1698	Sequence 1698, Ap
13	12	100.0	408	15	US-10-066-543-625	Sequence 625, App
c 14	12	100.0	421	10	US-09-884-441-157	Sequence 157, App
c 15	12	100.0	421	11	US-09-907-969-157	Sequence 157, App
c 16	12	100.0	421	13	US-09-827-271-157	Sequence 157, App
c 17	12	100.0	421	15	US-10-198-053-157	Sequence 157, App
c 18	12	100.0	430	13	US-10-027-632-272428	Sequence 272428,
c 19	12	100.0	430	14	US-10-027-632-272428	Sequence 272428,
20	12	100.0	431	9	US-09-922-217-541	Sequence 541, App
21	12	100.0	431	10	US-09-833-263-541	Sequence 541, App
22	12	100.0	431	14	US-10-025-380-541	Sequence 541, App
c 23	12	100.0	432	10	US-09-878-178-1126	Sequence 1126, Ap
c 24	12	100.0	432	14	US-10-046-935-1126	Sequence 1126, Ap
c 25	12	100.0	432	15	US-10-146-502-1126	Sequence 1126, Ap
26	12	100.0	474	11	US-09-918-995-33034	Sequence 33034, A
c 27	12	100.0	477	13	US-10-027-632-267906	Sequence 267906,
c 28	12	100.0	477	14	US-10-027-632-267906	Sequence 267906,
c 29	12	100.0	479	11	US-09-918-995-20210	Sequence 20210, A
30	11	91.7	31	9	US-09-801-274-1086	Sequence 1086, Ap
c 31	11	91.7	114	9	US-09-864-761-30557	Sequence 30557, A
32	11	91.7	125	13	US-10-029-386-26723	Sequence 26723, A
33	11	91.7	163	13	US-10-029-386-21784	Sequence 21784, A
34	11	91.7	182	10	US-09-878-574-941	Sequence 941, App
c 35	11	91.7	186	10	US-09-938-842A-531	Sequence 531, App
c 36	11	91.7	200	14	US-10-005-858-2	Sequence 2, Appli
c 37	11	91.7	207	9	US-09-864-761-30187	Sequence 30187, A
c 38	11	91.7	232	13	US-09-237-183A-3	Sequence 3, Appli
39	11	91.7	236	14	US-10-033-067-5	Sequence 5, Appli
c 40	11	91.7	257	10	US-09-728-444-65	Sequence 65, Appl
41	11	91.7	262	9	US-09-864-761-30235	Sequence 30235, A
c 42	11	91.7	262	15	US-10-060-036-1454	Sequence 1454, Ap
c 43	11	91.7	273	10	US-09-974-300-3145	Sequence 3145, Ap
c 44	11	91.7	277	9	US-09-294-093B-3863	Sequence 3863, Ap
c 45	11	91.7	285	9	US-09-294-093B-3827	Sequence 3827, Ap

ALIGNMENTS

RESULT 1
US-10-194-035-18
; Sequence 18, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
; APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
; APPLICANT: SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
; APPLICANT: KLINMAN, Dennis
; APPLICANT: ISHII, Ken
; APPLICANT: VERTHELYI, Daniela
; TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
; FILE REFERENCE: 4239-63317
; CURRENT APPLICATION NUMBER: US/10/194,035
; CURRENT FILING DATE: 2002-07-12
; PRIOR APPLICATION NUMBER: PCT/US01/01122
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: US 60/176,115
; PRIOR FILING DATE: 2000-01-14
; NUMBER OF SEQ ID NOS: 119
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 18
; LENGTH: 12
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-18

Query Match 100.0%; Score 12; DB 13; Length 12;
Best Local Similarity 100.0%; Pred. No. 3e+02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 TGCAGCGTTCTC 12
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Db          1 TGCAGCGTTCTC 12
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RESULT 2

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US-10-068-160-74
; Sequence 74, Application US/10068160
; Publication No. US20030060440A1
; GENERAL INFORMATION:
;  APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA, REPRESENTED BY THE
;  APPLICANT:  SECRETARY, DEPARTMENT OF HEALTH AND HUMAN SERVICES
;  APPLICANT:  KLINMAN, Dennis
;  APPLICANT:  ISHII, Ken
;  APPLICANT:  VERTHELYI, Daniela
;  TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
;  FILE REFERENCE: 4239-61999
;  CURRENT APPLICATION NUMBER: US/10/068,160
;  CURRENT FILING DATE:  2002-02-06
;  PRIOR APPLICATION NUMBER: 60/128,898
;  PRIOR FILING DATE: 1999-04-12
;  NUMBER OF SEQ ID NOS: 120
;  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 74
;   LENGTH: 12
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Oligonucleotide
US-10-068-160-74

  Query Match             100.0%;  Score 12;  DB 15;  Length 12;
  Best Local Similarity   100.0%;  Pred. No. 3e+02;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db          1 TGCAGCGTTCTC 12


RESULT 3
US-09-888-326-102
; Sequence 102, Application US/09888326
; Publication No. US20030026801A1
; GENERAL INFORMATION:
;  APPLICANT: Weiner, George
;  APPLICANT:  Hartmann, Gunther
;  TITLE OF INVENTION: Methods for Enhancing Antibody-Induced
;  TITLE OF INVENTION:  Cell Lysis and Treating Cancer
;  FILE REFERENCE: C1039/7052 (AWS)
;  CURRENT APPLICATION NUMBER: US/09/888,326
;  CURRENT FILING DATE:  2001-06-22
;  PRIOR APPLICATION NUMBER: US 60/213,346
;  PRIOR FILING DATE: 2000-06-22
;  NUMBER OF SEQ ID NOS: 848
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 102
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic oligonucleotide
;   NAME/KEY: misc_feature
;   LOCATION: (0)...(0)
;   OTHER INFORMATION: phosphodiester backbone
US-09-888-326-102

  Query Match             100.0%;  Score 12;  DB 11;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 2.8e+02;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db          9 TGCAGCGTTCTC 20


RESULT 4
US-09-776-479-715
; Sequence 715, Application US/09776479
; Publication No. US20030087848A1
; GENERAL INFORMATION:
;  APPLICANT: Bratzler, Robert L.
;  APPLICANT:  Petersen, Deanna M.
;  APPLICANT:  Fouron, Yves
;  TITLE OF INVENTION: Immunostimulatory Nucleic Acids for the
;  TITLE OF INVENTION:  Treatment of Asthma and Allergy
;  FILE REFERENCE: C1037/7013 (HCL/MAT)
;  CURRENT APPLICATION NUMBER: US/09/776,479
;  CURRENT FILING DATE:  2001-02-02
;  PRIOR APPLICATION NUMBER: US 60/179,991
;  PRIOR FILING DATE: 2000-02-03
;  NUMBER OF SEQ ID NOS: 1093
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 715
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic Sequence
US-09-776-479-715

  Query Match             100.0%;  Score 12;  DB 11;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 2.8e+02;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db          9 TGCAGCGTTCTC 20


RESULT 5
US-10-194-035-25
; Sequence 25, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
;  APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
;  APPLICANT:  SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
;  APPLICANT:  KLINMAN, Dennis
;  APPLICANT:  ISHII, Ken
;  APPLICANT:  VERTHELYI, Daniela
;  TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
;  FILE REFERENCE: 4239-63317
;  CURRENT APPLICATION NUMBER: US/10/194,035
;  CURRENT FILING DATE:  2002-07-12
;  PRIOR APPLICATION NUMBER: PCT/US01/01122
;  PRIOR FILING DATE: 2001-07-19
;  PRIOR APPLICATION NUMBER: US 60/176,115
;  PRIOR FILING DATE: 2000-01-14
;  NUMBER OF SEQ ID NOS: 119
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 25
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-25

  Query Match             100.0%;  Score 12;  DB 13;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 2.8e+02;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db          9 TGCAGCGTTCTC 20


RESULT 6
US-10-112-653-688
; Sequence 688, Application US/10112653
; Publication No. US20030050268A1
; GENERAL INFORMATION:
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```
;  APPLICANT: Krieg, Arthur M.
;  APPLICANT:  Berg, Daniel J.
;  TITLE OF INVENTION: IMMUNOSTIMULATORY NUCLEIC ACID FOR
;  TITLE OF INVENTION:  TREATMENT OF NON-ALLERGIC INFLAMMATORY DISEASES
;  FILE REFERENCE: C01039/70060(AWS)
;  CURRENT APPLICATION NUMBER: US/10/112,653
;  CURRENT FILING DATE:  2002-03-29
;  PRIOR APPLICATION NUMBER: US 60/279,642
;  PRIOR FILING DATE: 2001-03-29
;  NUMBER OF SEQ ID NOS: 1040
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 688
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic Oligonucleotide
US-10-112-653-688

  Query Match             100.0%;  Score 12;  DB 15;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 2.8e+02;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db          9 TGCAGCGTTCTC 20


RESULT 7
US-10-017-995-715
; Sequence 715, Application US/10017995
; Publication No. US20030055014A1
; GENERAL INFORMATION:
;  APPLICANT: Bratzler, Robert L.
;  TITLE OF INVENTION: Inhibition of Angiogenesis by Nucleic Acids
;  FILE REFERENCE: C1037/7025 (HCL/MAT)
;  CURRENT APPLICATION NUMBER: US/10/017,995
;  CURRENT FILING DATE:  2001-12-18
;  PRIOR APPLICATION NUMBER: US 60/255,534
;  PRIOR FILING DATE: 2000-12-14
;  NUMBER OF SEQ ID NOS: 1093
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 715
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic Sequence
US-10-017-995-715

  Query Match             100.0%;  Score 12;  DB 15;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 2.8e+02;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db          9 TGCAGCGTTCTC 20


RESULT 8
US-09-764-891-2386
; Sequence 2386, Application US/09764891
; Publication No. US20030077808A1
; GENERAL INFORMATION:
;  APPLICANT: Rosen et al.
;  TITLE OF INVENTION: Nucleic Acids, Proteins, and Antibodies
;  FILE REFERENCE: PC006
;  CURRENT APPLICATION NUMBER: US/09/764,891
;  CURRENT FILING DATE:  2001-01-17
;  Prior application data removed - consult PALM or file wrapper
;  NUMBER OF SEQ ID NOS: 10231
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 2386
;   LENGTH: 177
;   TYPE: DNA
;   ORGANISM: Homo sapiens
;   FEATURE:
;   NAME/KEY: SITE
;   LOCATION: (142)
;   OTHER INFORMATION: n equals a,t,g, or c
US-09-764-891-2386

  Query Match             100.0%;  Score 12;  DB 11;  Length 177;
  Best Local Similarity   100.0%;  Pred. No. 2.2e+02;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db         73 TGCAGCGTTCTC 84


RESULT 9
US-10-029-386-23488/c
; Sequence 23488, Application US/10029386
; Publication No. US20030194704A1
; GENERAL INFORMATION:
;  APPLICANT: Penn, Sharron G.
;  APPLICANT:  Rank, David R.
;  APPLICANT:  Hanzel, David K.
;  TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL FOR
;  TITLE OF INVENTION:  EXPRESSION ANALYSIS TWO
;  FILE REFERENCE: AEOMICA-X-2
;  CURRENT APPLICATION NUMBER: US/10/029,386
;  CURRENT FILING DATE:  2001-12-20
;  NUMBER OF SEQ ID NOS: 34288
;  SOFTWARE: Annomax Sequence Listing Engine vers. 1.1
; SEQ ID NO 23488
;   LENGTH: 238
;   TYPE: DNA
;   ORGANISM: Homo sapiens
;   FEATURE:
;   OTHER INFORMATION: MAP TO CHR11.3
;   OTHER INFORMATION: EXPRESSED IN PLACENTA, SIGNAL = 1.5
;   OTHER INFORMATION: EXPRESSED IN HEART, SIGNAL = 2.1
;   OTHER INFORMATION: EXPRESSED IN HELA, SIGNAL = 2.7
;   OTHER INFORMATION: EXPRESSED IN BONE MARROW, SIGNAL = 1.6
;   OTHER INFORMATION: EXPRESSED IN FETAL LIVER, SIGNAL = 2.1
;   OTHER INFORMATION: EXPRESSED IN ADULT LIVER, SIGNAL = 2.2
;   OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 1.8
;   OTHER INFORMATION: SWISSPROT HIT: P01267, EVALUE 5.00e-04
;   OTHER INFORMATION: NT HIT: AJ400877.1, EVALUE 0.00e+00
;   OTHER INFORMATION: EST_HUMAN HIT: BF526465.1, EVALUE 1.00e-90
US-10-029-386-23488

  Query Match             100.0%;  Score 12;  DB 13;  Length 238;
  Best Local Similarity   100.0%;  Pred. No. 2.1e+02;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db         82 TGCAGCGTTCTC 71


RESULT 10
US-09-923-876-6331
; Sequence 6331, Application US/09923876
; Patent No. US20020013958A1
; GENERAL INFORMATION:
;  APPLICANT: Lalgudi, Raghunath V.
;  APPLICANT:  Kamigaki, Laura Y. (Ito)
;  APPLICANT:  Sherman, Bradley K.
;  TITLE OF INVENTION: POLYNUCLEOTIDES AND POLYPEPTIDES DERIVED FROM CORN SEEDLING
;  FILE REFERENCE: PL-0012-1 CON
;  CURRENT APPLICATION NUMBER: US/09/923,876
;  CURRENT FILING DATE:  2001-08-06
;  PRIOR APPLICATION NUMBER: 09/298,329
```

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;  PRIOR FILING DATE: 1999-04-21
;  PRIOR APPLICATION NUMBER: 60/085,331
;  PRIOR FILING DATE: 1998-05-05
;  NUMBER OF SEQ ID NOS: 6332
;  SOFTWARE: PERL Program
; SEQ ID NO 6331
;    LENGTH: 258
;    TYPE: DNA
;    ORGANISM: Zea mays
;    FEATURE:
;    NAME/KEY: misc_feature
;    OTHER INFORMATION: Incyte ID No. US20020013958A1 700458893H1
;    NAME/KEY: unsure
;    LOCATION: 43, 46
;    OTHER INFORMATION: a, t, c, g, or other
US-09-923-876-6331

  Query Match             100.0%;  Score 12;  DB 9;  Length 258;
  Best Local Similarity   100.0%;  Pred. No. 2.1e+02;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db         85 TGCAGCGTTCTC 96


RESULT 11
US-09-923-876-6331
; Sequence 6331, Application US/09923876
; Publication No. US20030237110A9
; GENERAL INFORMATION:
;  APPLICANT: Lalgudi, Raghunath V.
;  APPLICANT:  Kamigaki, Laura Y. (Ito)
;  APPLICANT:  Sherman, Bradley K.
;  TITLE OF INVENTION: POLYNUCLEOTIDES AND POLYPEPTIDES DERIVED FROM CORN SEEDLING
;  FILE REFERENCE: PL-0012-1 CON
;  CURRENT APPLICATION NUMBER: US/09/923,876
;  CURRENT FILING DATE:  2001-08-06
;  PRIOR APPLICATION NUMBER: 09/298,329
;  PRIOR FILING DATE: 1999-04-21
;  PRIOR APPLICATION NUMBER: 60/085,331
;  PRIOR FILING DATE: 1998-05-05
;  NUMBER OF SEQ ID NOS: 6332
;  SOFTWARE: PERL Program
; SEQ ID NO 6331
;    LENGTH: 258
;    TYPE: DNA
;    ORGANISM: Zea mays
;    FEATURE:
;    NAME/KEY: misc_feature
;    OTHER INFORMATION: Incyte ID No. US20030237110A9 700458893H1
;    NAME/KEY: unsure
;    LOCATION: 43, 46
;    OTHER INFORMATION: a, t, c, g, or other
US-09-923-876-6331

  Query Match             100.0%;  Score 12;  DB 12;  Length 258;
  Best Local Similarity   100.0%;  Pred. No. 2.1e+02;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db         85 TGCAGCGTTCTC 96


RESULT 12
US-09-960-352-1698/c
; Sequence 1698, Application US/09960352
; Patent No. US20020137139A1
; GENERAL INFORMATION:
;  APPLICANT: Warren, Wesley C.
;  APPLICANT:  Tao, Nengbing
;  APPLICANT:  Byatt, John C.
;  APPLICANT:  Mathialagan, Nagappan
;  TITLE OF INVENTION: NUCLEIC ACID AND OTHER MOLECULES ASSOCIATED WITH LACTATION AND
;  TITLE OF INVENTION:  MUSCLE AND FAT DEPOSITION
;  FILE REFERENCE: 16511.006/37-21(10298)C
;  CURRENT APPLICATION NUMBER: US/09/960,352
;  CURRENT FILING DATE:  2001-09-24
;  NUMBER OF SEQ ID NOS: 15112
; SEQ ID NO 1698
;    LENGTH: 375
;    TYPE: DNA
;    ORGANISM: Bos taurus
;    OTHER INFORMATION: Clone ID: 08-LIB3057-008-Q1-K1-B11
US-09-960-352-1698

  Query Match             100.0%;  Score 12;  DB 10;  Length 375;
  Best Local Similarity   100.0%;  Pred. No. 2e+02;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db        343 TGCAGCGTTCTC 332


RESULT 13
US-10-066-543-625
; Sequence 625, Application US/10066543
; Publication No. US20030087818A1
; GENERAL INFORMATION:
;  APPLICANT: Jiang, Yuqiu
;  APPLICANT:  Pyle, Ruth A.
;  APPLICANT:  Xu, Jiangchun
;  APPLICANT:  Indirias, Carol Yoseph
;  APPLICANT:  Lodes, Michael J.
;  APPLICANT:  Secrist, Heather
;  APPLICANT:  Carter, Darrick
;  APPLICANT:  Fanger, Gary R.
;  APPLICANT:  Smith, Carole L.
;  APPLICANT:  Durham, Margarita
;  APPLICANT:  Stolk, John A.
;  TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY
;  TITLE OF INVENTION:  AND DIAGNOSIS OF COLON CANCER
;  FILE REFERENCE: 210121.563
;  CURRENT APPLICATION NUMBER: US/10/066,543
;  CURRENT FILING DATE:  2002-01-31
;  NUMBER OF SEQ ID NOS: 3417
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 625
;    LENGTH: 408
;    TYPE: DNA
;    ORGANISM: Homo sapiens
US-10-066-543-625

  Query Match             100.0%;  Score 12;  DB 15;  Length 408;
  Best Local Similarity   100.0%;  Pred. No. 2e+02;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db        380 TGCAGCGTTCTC 391


RESULT 14
US-09-884-441-157/c
; Sequence 157, Application US/09884441
; Patent No. US20020119158A1
; GENERAL INFORMATION:
;  APPLICANT: Algate, Paul A.
;  APPLICANT:  Carter, Darrick
;  TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY AND
;  TITLE OF INVENTION:  DIAGNOSIS OF OVARIAN CANCER
;  FILE REFERENCE: 210121.462C7
;  CURRENT APPLICATION NUMBER: US/09/884,441
;  CURRENT FILING DATE:  2001-06-18
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;  NUMBER OF SEQ ID NOS: 489
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 157
;   LENGTH: 421
;   TYPE: DNA
;   ORGANISM: Homo sapien
US-09-884-441-157

  Query Match             100.0%;  Score 12;  DB 10;  Length 421;
  Best Local Similarity   100.0%;  Pred. No. 2e+02;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db        318 TGCAGCGTTCTC 307


RESULT 15
US-09-907-969-157/c
; Sequence 157, Application US/09907969
; Publication No. US20030091580A1
; GENERAL INFORMATION:
;  APPLICANT: Mitcham, Jennifer L.
;  APPLICANT:  King, Gordon E.
;  APPLICANT:  Algate, Paul A.
;  APPLICANT:  Fling, Steven P.
;  APPLICANT:  Retter, Marc W.
;  APPLICANT:  Fanger, Gary Richard
;  APPLICANT:  Reed, Steven G.
;  APPLICANT:  Vedvick, Thomas S.
;  APPLICANT:  Carter, Darrick
;  APPLICANT:  Hill, Paul
;  APPLICANT:  Albone, Earl
;  TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY
;  TITLE OF INVENTION:  AND DIAGNOSIS OF OVARIAN CANCER
;  FILE REFERENCE: 210121.462C8
;  CURRENT APPLICATION NUMBER: US/09/907,969
;  CURRENT FILING DATE:  2001-07-17
;  NUMBER OF SEQ ID NOS: 596
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 157
;   LENGTH: 421
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-907-969-157

  Query Match             100.0%;  Score 12;  DB 11;  Length 421;
  Best Local Similarity   100.0%;  Pred. No. 2e+02;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db        318 TGCAGCGTTCTC 307


Search completed: January 20, 2004, 20:51:04
Job time : 80.7647 secs
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GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: January 20, 2004, 17:17:18 ; Search time 736.059 Seconds
(without alignments)
396.237 Million cell updates/sec

Title: US-10-068-160-74
Perfect score: 12
Sequence: 1 tgcagcgttctc 12

Scoring table: OLIGO_NUC
Gapop 60.0 , Gapext 60.0

Searched: 22781392 seqs, 12152238056 residues

Word size : 0

Total number of hits satisfying chosen parameters: 21849362

Minimum DB seq length: 0
Maximum DB seq length: 500

Post-processing: Listing first 45 summaries

Database : EST:*
1: em_estba:*
2: em_esthum:*
3: em_estin:*
4: em_estmu:*
5: em_estov:*
6: em_estpl:*
7: em_estro:*
8: em_htc:*
9: gb_est1:*
10: gb_est2:*
11: gb_htc:*
12: gb_est3:*
13: gb_est4:*
14: gb_est5:*
15: em_estfun:*
16: em_estom:*
17: em_gss_hum:*
18: em_gss_inv:*
19: em_gss_pln:*
20: em_gss_vrt:*
21: em_gss_fun:*
22: em_gss_mam:*
23: em_gss_mus:*
24: em_gss_pro:*
25: em_gss_rod:*
26: em_gss_phg:*
27: em_gss_vrl:*
28: gb_gss1:*
29: gb_gss2:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	12	100.0	56	29	CNS04GF1	AL289558 Tetraodon
c 2	12	100.0	79	9	AA165763	AA165763 ms60f12.r
c 3	12	100.0	116	10	BE004779	BE004779 MR2-BN011
4	12	100.0	121	10	BG691216	BG691216 340278 BA
c 5	12	100.0	169	28	BH194564	BH194564 TC3-3E5.T
c 6	12	100.0	174	28	BH759248	BH759248 KG00610-3
7	12	100.0	181	13	BQ419254	BQ419254 faa36e08.
c 8	12	100.0	190	12	BM854919	BM854919 K-EST0137
9	12	100.0	201	9	AI203283	AI203283 qr24c10.x
10	12	100.0	211	9	AI858682	AI858682 wl41a09.x
c 11	12	100.0	221	10	BE831758	BE831758 RC0-MT005
c 12	12	100.0	227	12	BM797505	BM797505 K-EST0080
c 13	12	100.0	235	14	CA387791	CA387791 669857 NC
14	12	100.0	237	9	AW416284	AW416284 51479 MAR
15	12	100.0	238	28	AZ596456	AZ596456 1M0409A18
16	12	100.0	241	13	BU821792	BU821792 UB28CPA01
17	12	100.0	243	9	AW817473	AW817473 QV0-ST024
18	12	100.0	247	10	BE663022	BE663022 105343 MA
19	12	100.0	251	9	AA532401	AA532401 nj53e10.s
20	12	100.0	253	12	BP109757	BP109757 BP109757
21	12	100.0	256	12	BI593750	BI593750 As_L3_04B
c 22	12	100.0	262	10	BE762835	BE762835 QV3-NT002
23	12	100.0	265	14	CB884492	CB884492 Ma1072 Ha
24	12	100.0	267	29	BZ769276	BZ769276 SALK_1419
25	12	100.0	272	10	BG214763	BG214763 RST34417
c 26	12	100.0	272	10	BE090763	BE090763 PM1-BT072
c 27	12	100.0	278	9	AI505997	AI505997 vl23h04.x
c 28	12	100.0	282	10	BB245376	BB245376 BB245376
c 29	12	100.0	282	28	AZ818851	AZ818851 2M0089D11
c 30	12	100.0	285	9	AV343188	AV343188 AV343188
c 31	12	100.0	285	14	D81567	D81567 HUM173E01B
32	12	100.0	288	9	AV640115	AV640115 AV640115
33	12	100.0	288	9	AA323617	AA323617 EST26423
34	12	100.0	289	14	T19220	T19220 d01011t Tes
c 35	12	100.0	290	12	BI171742	BI171742 RE13575.5
c 36	12	100.0	290	13	BY156357	BY156357 BY156357
37	12	100.0	290	14	D53745	D53745 HUM118H10B
38	12	100.0	293	9	AV364570	AV364570 AV364570
c 39	12	100.0	302	9	AA256868	AA256868 zr81e12.r
c 40	12	100.0	304	9	AA328163	AA328163 EST31604
41	12	100.0	305	10	BE368376	BE368376 601220442
c 42	12	100.0	306	9	AA357910	AA357910 EST66772
c 43	12	100.0	306	10	AW862535	AW862535 QV0-CT038
c 44	12	100.0	306	13	BY268459	BY268459 BY268459
45	12	100.0	309	9	AW011732	AW011732 ul90f09.x

ALIGNMENTS

RESULT 1
CNS04GF1
LOCUS CNS04GF1 56 bp DNA linear GSS 01-SEP-2000
DEFINITION Tetraodon nigroviridis genome survey sequence PUC-Ori end of clone 108I20 of library G from Tetraodon nigroviridis, genomic survey sequence.
ACCESSION AL289558
VERSION AL289558.1 GI:8028135
KEYWORDS GSS; genome survey sequence.
SOURCE Tetraodon nigroviridis
ORGANISM Tetraodon nigroviridis
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei; Acanthomorpha; Acanthopterygii; Percomorpha; Tetraodontiformes; Tetradontoidea; Tetraodontidae; Tetraodon.
REFERENCE 1
AUTHORS Roest Crollius,H., Jaillon,O., Dasilva,C., Bouneau,L., Fisher,C., Bernot,A., Fizames,C., Wincker,P., Brottier,P., Quetier,F., Saurin,W. and Weissenbach,J.
TITLE Estimate of human gene number provided by genome-wide analysis using Tetraodon nigroviridis DNA sequence
JOURNAL Nat. Genet. 25 (2), 235-238 (2000)
MEDLINE 20296633
PUBMED 10835645
REFERENCE 2
AUTHORS Roest Crollius,H., Jaillon,O., Dasilva,C., Ozouf-Costaz,C., Fizames,C., Fischer,C., Bouneau,L., Billault,A., Quetier,F.,

```
            Saurin,W., Bernot,A. and Weissenbach,J.
  TITLE     Characterization and repeat analysis of the compact genome of the
            freshwater pufferfish Tetraodon nigroviridis
  JOURNAL   Genome Res. 10 (7), 939-949 (2000)
  MEDLINE   20359837
   PUBMED   10899143
REFERENCE   3  (bases 1 to 56)
  AUTHORS   Genoscope.
  TITLE     Direct Submission
  JOURNAL   Submitted (12-APR-2000) Genoscope - Centre National de Sequencage :
            BP 191 91006 EVRY cedex - FRANCE (E-mail : seqref@genoscope.cns.fr
            - Web : www.genoscope.cns.fr)
COMMENT     This sequence is a single read and was generated as part of a large
            scale clone-end sequencing project of the Tetraodon nigroviridis
            genome. For more information, please take a look at
            http://www.genoscope.cns.fr/Tetraodon.
FEATURES             Location/Qualifiers
     source          1. .56
                     /organism="Tetraodon nigroviridis"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:99883"
                     /clone="108I20"
                     /clone_lib="G"
                     /note="Genoscope sequence ID : C0BG108BE10SP1~end :
                     PUC-Ori"
BASE COUNT        5 a     14 c     16 g     20 t      1 others
ORIGIN

  Query Match             100.0%;  Score 12;  DB 29;  Length 56;
  Best Local Similarity   100.0%;  Pred. No. 9.1e+02;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db         15 TGCAGCGTTCTC 26


RESULT 2
AA165763/c
LOCUS       AA165763                 79 bp    mRNA    linear   EST 12-FEB-1997
DEFINITION  ms60f12.r1 Stratagene mouse embryonic carcinoma (#937317) Mus
            musculus cDNA clone IMAGE:615983 5' similar to TR:E93245 E93245 ETN
            INSERT IN THE FAS APOPTOSIS GENE OF MRL-IPR/IPR. [1] ;, mRNA
            sequence.
ACCESSION   AA165763
VERSION     AA165763.1  GI:1743978
KEYWORDS    EST.
SOURCE      Mus musculus (house mouse)
  ORGANISM  Mus musculus
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
REFERENCE   1  (bases 1 to 79)
  AUTHORS   Marra,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dubuque,T.,
            Geisel,S., Kucaba,T., Lacy,M., Le,M., Martin,J., Morris,M.,
            Schellenberg,K., Steptoe,M., Tan,F., Underwood,K., Moore,B.,
            Theising,B., Wylie,T., Lennon,G., Soares,B., Wilson,R. and
            Waterston,R.
  TITLE     The WashU-HHMI Mouse EST Project
  JOURNAL   Unpublished
COMMENT     Contact: Marra M/Mouse EST Project
            WashU-HHMI Mouse EST Project
            Washington University School of MedicineP
            4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
            Tel: 314 286 1800
            Fax: 314 286 1810
            Email: mouseest@watson.wustl.edu
            This clone is available royalty-free through LLNL ; contact the
            IMAGE Consortium (info@image.llnl.gov) for further information.
            MGI:376807
            Possible reversed clone: similarity on wrong strand
            Seq primer: -28m13 rev1 ET from Amersham
            High quality sequence stop: 1.
FEATURES             Location/Qualifiers
     source          1. .79
                     /organism="Mus musculus"
                     /mol_type="mRNA"
                     /db_xref="taxon:10090"
                     /clone="IMAGE:615983"
                     /tissue_type="carcinoma"
                     /dev_stage="embryonic"
                     /lab_host="SOLR (kanamycin resistant)"
                     /clone_lib="Stratagene mouse embryonic carcinoma (#937317
                     )"
                     /note="Vector: pBluescript SK-; Site_1: EcoRI; Site_2:
                     XhoI; Cloned unidirectionally.  Primer: Oligo dT. PI9 cell
                     line. Average insert size: 1.0 kb; Uni-ZAP XR Vector; ~5'
                     adaptor sequence: 5' GAATTCGGCACGAG 3' ~3' adaptor
                     sequence: 5' CTCGAGTTTTTTTTTTTTTTTT 3'"
BASE COUNT       28 a     15 c     24 g     12 t
ORIGIN

  Query Match             100.0%;  Score 12;  DB 9;  Length 79;
  Best Local Similarity   100.0%;  Pred. No. 9.5e+02;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db         54 TGCAGCGTTCTC 43


RESULT 3
BE004779/c
LOCUS       BE004779                 116 bp    mRNA    linear   EST 05-JUN-2000
DEFINITION  MR2-BN0114-270400-004-g06_1 BN0114 Homo sapiens cDNA, mRNA
            sequence.
ACCESSION   BE004779
VERSION     BE004779.1  GI:8265012
KEYWORDS    EST.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 116)
  AUTHORS   Dias Neto,E., Garcia Correa,R., Verjovski-Almeida,S., Briones,M.R.,
            Nagai,M.A., da Silva,W. Jr., Zago,M.A., Bordin,S., Costa,F.F.,
            Goldman,G.H., Carvalho,A.F., Matsukuma,A., Baia,G.S., Simpson,D.H.,
            Brunstein,A., deOliveira,P.S., Bucher,P., Jongeneel,C.V., O'Hare
            ,M.J., Soares,F., Brentani,R.R., Reis,L.F., de Souza,S.J. and
            Simpson,A.J.
  TITLE     Shotgun sequencing of the human transcriptome with ORF expressed
            sequence tags
  JOURNAL   Proc. Natl. Acad. Sci. U.S.A. 97 (7), 3491-3496 (2000)
  MEDLINE   20202663
   PUBMED   10737800
COMMENT     Contact: Simpson A.J.G.
            Laboratory of Cancer Genetics
            Ludwig Institute for Cancer Research
            Rua Prof. Antonio Prudente 109, 4 andar, 01509-010, Sao Paulo-SP,
            Brazil
            Tel: +55-11-2704922
            Fax: +55-11-2707001
            Email: asimpson@ludwig.org.br
            This sequence was derived from the FAPESP/LICR Human Cancer Genome
            Project. This entry can be seen in the following URL
            (http://www.ludwig.org.br/scripts/gethtml2.pl?t1=&t2=MR2-BN0114-270
            400-004-g06_1&t3=2000-04-27&t4=1)
            Seq primer: puc 18 forward
            High quality sequence stop: 116.
FEATURES             Location/Qualifiers
     source          1. .116
                     /organism="Homo sapiens"
                     /mol_type="mRNA"
                     /db_xref="taxon:9606"
                     /dev_stage="Adult"
                     /clone_lib="BN0114"
                     /note="Organ: breast_normal; Vector: puc18; Site_1: SmaI;
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Site_2: SmaI; A mini-library was made by cloning products derived from ORESTES PCR (U.S. Letters Patent application No. 196,716 - Ludwig Institute for Cancer Research) profiles into the pUC 18 vector. Reverse transcription of tissue mRNA and cDNA amplification were performed under low stringency conditions."
BASE COUNT 36 a 27 c 27 g 26 t
ORIGIN

Query Match 100.0%; Score 12; DB 10; Length 116;
Best Local Similarity 100.0%; Pred. No. 9.9e+02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TGCAGCGTTCTC 12
||||||||||||
Db 105 TGCAGCGTTCTC 94

RESULT 4
BG691216
LOCUS BG691216 121 bp mRNA linear EST 27-MAR-2003
DEFINITION 340278 BARC 5BOV Bos taurus cDNA 5', mRNA sequence.
ACCESSION BG691216
VERSION BG691216.1 GI:13933036
KEYWORDS EST.
SOURCE Bos taurus (cow)
ORGANISM Bos taurus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea; Bovidae; Bovinae; Bos.
REFERENCE 1 (bases 1 to 121)
AUTHORS Sonstegard,T., Capuco,A.V., White,J., Van Tassell,C.P., Connor,E.E., Cho,J., Sultana,R., Shade,L., Wray,J.E., Wells,K.D. and Quackenbush,J.
TITLE Analysis of bovine mammary gland EST and functional annotation of the Bos taurus gene index
JOURNAL Mamm. Genome 13 (7), 373-379 (2002)
MEDLINE 22135956
PUBMED 12140684
COMMENT Contact: Sonstegard TS
USDA, ARS, Beltsville Agricultural Research Center
Bdlg. 200 Rm 2A, Beltsville, MD 20705, USA
Tel: 301 504 8416
Fax: 301 504 8414
Email: tads@lpsi.barc.usda.gov
Single pass sequencing. Bases called and alt_trimmed with phred v0.980904.e. Vector identified by cross_match with the -minscore 18 and -minmatch 12 options.
PCR PRimers
FORWARD: AGGAAACAGCTATGACCAT
BACKWARD: GTTTTCCCAGTCACGACG
Plate: 98 row: B column: 5
Seq primer: ATTTAGGTGACACTATAG.
FEATURES Location/Qualifiers
source 1. .121
/organism="Bos taurus"
/mol_type="mRNA"
/db_xref="taxon:9913"
/tissue_type="pooled"
/lab_host="DH10B"
/clone_lib="BARC 5BOV"
/note="Vector: pCMV SPORT6; Site_1: NotI; Site_2: SalI; Library made from pooled mRNA isolated from mammary tissues at eight physiological, developmental, and disease states."
BASE COUNT 18 a 46 c 36 g 21 t
ORIGIN

Query Match 100.0%; Score 12; DB 10; Length 121;
Best Local Similarity 100.0%; Pred. No. 1e+03;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TGCAGCGTTCTC 12
||||||||||||
Db 88 TGCAGCGTTCTC 99

RESULT 5
BH194564/c
LOCUS BH194564 169 bp DNA linear GSS 24-OCT-2001
DEFINITION TC3-3E5.TV TC3 Trypanosoma cruzi genomic clone TC3-3E5, genomic survey sequence.
ACCESSION BH194564
VERSION BH194564.1 GI:16362417
KEYWORDS GSS.
SOURCE Trypanosoma cruzi
ORGANISM Trypanosoma cruzi
Eukaryota; Euglenozoa; Kinetoplastida; Trypanosomatidae; Trypanosoma; Schizotrypanum.
REFERENCE 1 (bases 1 to 169)
AUTHORS Kluge,S., Edwards,K.E., Nilsson,D., Bontempi,E.J., Myler,P., Stuart,K., Ghedin,E., El-Sayed,N.M. and Andersson,B.
TITLE Clustering and analysis of BAC-end and GSS sequences from Trypanosoma cruzi
JOURNAL Unpublished
COMMENT Other_GSSs: TC3-3E5.TP
Contact: Bjorn Andersson
Department of Genetics and Pathology
Uppsala University
Rudbeck Laboratory, SE-751 85, Uppsala, Sweden
Tel: 46 18 471 4107
Fax: 46 18 471 4808
Email: bjorn.andersson@genpat.uu.se
Clones are derived from the Trypanosoma cruzi CL-Brener BAC library TC3. For clone availability, please contact Dr. Bjorn Andersson at Uppsala University (bjorn.andersson@genpat.uu.se).
Seq primer: T7
Class: BAC ends.
FEATURES Location/Qualifiers
source 1. .169
/organism="Trypanosoma cruzi"
/mol_type="genomic DNA"
/strain="CL Brener"
/db_xref="taxon:5693"
/clone="TC3-3E5"
/clone_lib="TC3"
/note="Vector: pBeloBAC11; Site_1: Hin dIII; Constructed for Uppsala University by Marie-Christine Le Paslier in the laboratory of Denis Le Paslier at the Centre d'Etude du Polymorphisme Humain (CEPH), Paris, France. Briefly, Trypanosoma cruzi CL-Brener agarose embedded DNA (obtained from Dr. Franco da Silveira) was partially digested with Hin dIII. High molecular weight fragments were ligated in pBeloBAC11 digested with Hin dIII. The average insert size is 100 kb. Total clone coverage: approx. 33 X the haploid genome."
BASE COUNT 30 a 38 c 51 g 50 t
ORIGIN

Query Match 100.0%; Score 12; DB 28; Length 169;
Best Local Similarity 100.0%; Pred. No. 1e+03;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TGCAGCGTTCTC 12
||||||||||||
Db 99 TGCAGCGTTCTC 88

RESULT 6
BH759248/c
LOCUS BH759248 174 bp DNA linear GSS 12-MAR-2002
DEFINITION KG00610-3prime Drosophila melanogaster P{SUPor-P} P element insertion lines Drosophila melanogaster genomic Sequence recovered from 3' end of P element, genomic survey sequence.
ACCESSION BH759248
VERSION BH759248.1 GI:19352487

```
KEYWORDS    GSS.
SOURCE      Drosophila melanogaster (fruit fly)
  ORGANISM  Drosophila melanogaster
            Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
            Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
            Ephydroidea; Drosophilidae; Drosophila.
REFERENCE   1  (bases 1 to 174)
  AUTHORS   Levis,R., Hoskins,R., Liao,G., Mozden,N., Tsang,G., He,Y., Karpen
            ,G., Bellen,H., Rubin,G. and Spradling,A.
  TITLE     The Berkeley Drosophila Genome Project Gene Disruption Project
  JOURNAL   Unpublished
COMMENT     Contact: Gerald Rubin
            Berkeley Drosophila Genome Project
            University of California, Berkeley
            LSA Building, Berkeley, CA 94720-3200, USA
            Fax: 5106439947
            Email: gerry@fruitfly.berkeley.edu
            Sequence recovery method was inverse PCR.
             Sequence orientation is forward strand relative to 5' end of P
            element
             The P element insertion position is base 1 in the 174 bases. This
            insertion position refers to the first base of the 8 base target
            recognition sequence.
            Class: transposon-tagged.
FEATURES             Location/Qualifiers
     source          1. .174
                     /organism="Drosophila melanogaster"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:7227"
                     /clone_lib="Drosophila melanogaster P{SUPor-P} P element
                     insertion lines"
                     /note="Inverse PCR was performed on Drosophila
                     melanogaster strains each of which contains one or more
                     P{SUPor-P} P-element transposon insertion. The resultant
                     fragment for each strain was directly sequenced to
                     determine the genomic sequence at the site of insertion.
                     Details of the protocols used can be found at
                     http://www.fruitfly.org/about/methods/inverse.pcr.html."
BASE COUNT       48 a     36 c     51 g     39 t
ORIGIN

  Query Match             100.0%;  Score 12;  DB 28;  Length 174;
  Best Local Similarity   100.0%;  Pred. No. 1e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db        137 TGCAGCGTTCTC 126


RESULT 7
BQ419254
LOCUS       BQ419254                181 bp    mRNA    linear   EST 23-MAY-2002
DEFINITION  faa36e08.y1 zebrafish fin day3 regeneration Danio rerio cDNA clone
            IMAGE:5911382 5', mRNA sequence.
ACCESSION   BQ419254
VERSION     BQ419254.1  GI:21124455
KEYWORDS    EST.
SOURCE      Danio rerio (zebrafish)
  ORGANISM  Danio rerio
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniformes
            ; Cyprinidae; Danio.
REFERENCE   1  (bases 1 to 181)
  AUTHORS   Clark,M., Johnson,S.L., Lehrach,H., Lee,R., Li,F., Marra,M., Eddy
            ,S., Hillier,L., Kucaba,T., Martin,J., Beck,C., Wylie,T., Underwood
            ,K., Steptoe,M., Theising,B., Allen,M., Bowers,Y., Person,B.,
            Swaller,T., Gibbons,M., Pape,D., Harvey,N., Schurk,R., Ritter,E.,
            Kohn,S., Shin,T., Jackson,Y., Cardenas,M., McCann,R., Waterston,R.
            and Wilson,R.
  TITLE     WashU Zebrafish EST Project 1998
  JOURNAL   Unpublished
COMMENT     Contact: Stephen L. Johnson
            Washington University School of Medicine
            4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108, USA
            Tel: 314 286 1800
            Fax: 314 286 1810
            Email: zbrafish@watson.wustl.edu
            cDNA Library Preparation: Raymond Lee. cDNA Library Arrayed by:
            Matthew Clark. DNA Sequencing by: Washington University Genome
            Sequencing Center Clone distribution: Genome Systems, St. Louis,
            Missouri (web address: www.genomesystems.com) (email contact:
            info@genomesystems.com) and Research Genetics, Huntsville, Alabama
            (web address: www.resgen.com) (email contact: info@resgen.com) and
            RessourcenZentrumPrimarDatenbank, Berlin, Germany (web address:
            www.rzpd.de)
            Seq primer: T3 ET from Amersham.
FEATURES             Location/Qualifiers
     source          1. .181
                     /organism="Danio rerio"
                     /mol_type="mRNA"
                     /db_xref="taxon:7955"
                     /clone="IMAGE:5911382"
                     /sex="mixed male and female"
                     /tissue_type="3 day fin regenerates"
                     /lab_host="E. coli XLOLR"
                     /clone_lib="zebrafish fin day3 regeneration"
                     /note="Vector: pBK-CMV; Site_1: EcoRI; Site_2: XhoI; 1st
                     strand cDNA primed with (GA)10ACTAGTCTCGAG(T)18, followed
                     by second strand synthesis, and ligated to 5' adapter (5'
                     )-aattcggcacgag- 3', 3'-gccgtgctc-5'.  cDNA was cloned
                     directionally (EcoRI/XhoI) into Stratagene Zap express
                     lambda phage arms.  Mass invivo excision done to obtain
                     inserts in pBK-CMV phagemid."
BASE COUNT       63 a     47 c     39 g     32 t
ORIGIN

  Query Match             100.0%;  Score 12;  DB 13;  Length 181;
  Best Local Similarity   100.0%;  Pred. No. 1e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db         50 TGCAGCGTTCTC 61


RESULT 8
BM854919/c
LOCUS       BM854919                190 bp    mRNA    linear   EST 06-MAR-2002
DEFINITION  K-EST0137622 S21SNU520 Homo sapiens cDNA clone S21SNU520-58-D08 5',
            mRNA sequence.
ACCESSION   BM854919
VERSION     BM854919.1  GI:19211318
KEYWORDS    EST.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 190)
  AUTHORS   Kim,N.S., Hahn,Y., Oh,J.H., Lee,J.Y., Ahn,H.Y., Chu,M.Y., Kim,M.R.,
            Oh,K.J., Cheong,J.E., Sohn,H.Y., Kim,J.M., Park,H.S., Kim,S. and
            Kim,Y.S.
  TITLE     21C Frontier Korean EST Project 2001
  JOURNAL   Unpublished
COMMENT     Contact: Kim YS
            Genome Research Center
            Korea Research Institute of Bioscience & Biotechnology
            52 Eoeun-dong Yuseong-gu, Daejeon 305-333, South Korea
            Tel: +82-42-860-4470
            Fax: +82-42-860-4409
            Email: yongsung@mail.kribb.re.kr
            Plate: 58  row: D  column: 08
            High quality sequence stop: 190.
FEATURES             Location/Qualifiers
     source          1. .190
                     /organism="Homo sapiens"
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```
                     /mol_type="mRNA"
                     /db_xref="taxon:9606"
                     /clone="S21SNU520-58-D08"
                     /sex="F"
                     /tissue_type="Stomach"
                     /cell_type="Floating aggregates"
                     /cell_line="SNU-520"
                     /lab_host="Top10F'"
                     /clone_lib="S21SNU520"
                     /note="Organ: Stomach; Vector: pTZ18RP1; Site_1: EcoRI;
                     Site_2: NotI; The poly (A)+ RNA was dephosphorylated with
                     bacterial alkaline phosphatase (BAP) and then decapped
                     with tabacco acid pyrophosphatase (TAP). The decapped
                     intact mRNA was ligated with DNA-RNA linker including EcoR
                     I site by treatment of T4 RNA ligase and the first strand
                     cDNA was synthesized from oligo dT-selected mRNA by
                     priming with dT-tailed vector. The dT-tailed vector was
                     adjusted to have about 60nt. The cDNA vector was
                     circularized with E. coli DNA ligase after digestion of
                     EcoRI which site is also included in vector. An RNA strand
                     converted to a DNA strand by Okayama-Berg method. The
                     obtained cDNA vectors were used for transformation of
                     competent cells E. coli Top10F' by electroporation method.
                     The cDNA libraries constructed by this method are
                     full-length enriched cDNA library."
BASE COUNT       50 a     47 c     47 g     46 t
ORIGIN

  Query Match             100.0%;  Score 12;  DB 12;  Length 190;
  Best Local Similarity   100.0%;  Pred. No. 1.1e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db        158 TGCAGCGTTCTC 147


RESULT 9
AI203283
LOCUS       AI203283                201 bp    mRNA    linear   EST 03-FEB-1999
DEFINITION  qr24c10.x1 NCI_CGAP_GC6 Homo sapiens cDNA clone IMAGE:1941810 3',
            mRNA sequence.
ACCESSION   AI203283
VERSION     AI203283.1  GI:3755889
KEYWORDS    EST.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 201)
  AUTHORS   NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
  TITLE     National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
            Tumor Gene Index
  JOURNAL   Unpublished
COMMENT     Contact: Robert Strausberg, Ph.D.
            Email: cgapbs-r@mail.nih.gov
            Tissue Procurement: Christopher A. Moskaluk, M.D., Ph.D., Michael
            R. Emmert-Buck, M.D., Ph.D.
             cDNA Library Preparation: M. Bento Soares, Ph.D., M. Fatima
            Bonaldo, Ph.D.
             cDNA Library Arrayed by: Greg Lennon, Ph.D.
             DNA Sequencing by: Washington University Genome Sequencing Center
             Clone distribution: NCI-CGAP clone distribution information can be
            found through the I.M.A.G.E. Consortium/LLNL at:
            www-bio.llnl.gov/bbrp/image/image.html
            Insert Length: 282   Std Error: 0.00
            Seq primer: -40UP from Gibco.
FEATURES             Location/Qualifiers
     source          1. .201
                     /organism="Homo sapiens"
                     /mol_type="mRNA"
                     /db_xref="taxon:9606"
                     /clone="IMAGE:1941810"
                     /tissue_type="pooled germ cell tumors"
                     /lab_host="DH10B"
                     /clone_lib="NCI_CGAP_GC6"
                     /note="Vector: pT7T3D-Pac (Pharmacia) with a modified
                     polylinker; Site_1: Not I; Site_2: Eco RI; Plasmid DNA
                     from the normalized library NCI_CGAP_GC4 was prepared, and
                     ss circles were made in vitro. Following HAP purification,
                     this DNA was used as tracer in a subtractive hybridization
                     reaction. The driver was PCR-amplified cDNAs from a pool
                     of 5,000 clones made from the same library (cloneIDs
                     1257096-1258631, 1469064-1470983, and 1475592-1476743).
                     Subtraction by Bento Soares and M. Fatima Bonaldo.  "
BASE COUNT       40 a     36 c     64 g     61 t
ORIGIN

  Query Match             100.0%;  Score 12;  DB 9;  Length 201;
  Best Local Similarity   100.0%;  Pred. No. 1.1e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db         74 TGCAGCGTTCTC 85


RESULT 10
AI858682
LOCUS       AI858682                211 bp    mRNA    linear   EST 07-MAR-2000
DEFINITION  wl41a09.x1 NCI_CGAP_Ut1 Homo sapiens cDNA clone IMAGE:2427448 3'
            similar to TR:O43791 O43791 SPOP. ;, mRNA sequence.
ACCESSION   AI858682
VERSION     AI858682.1  GI:5512298
KEYWORDS    EST.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 211)
  AUTHORS   NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
  TITLE     National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
            Tumor Gene Index
  JOURNAL   Unpublished
COMMENT     Contact: Robert Strausberg, Ph.D.
            Email: cgapbs-r@mail.nih.gov
            Tissue Procurement: Christopher Moskaluk, M.D., Ph.D., Michael R.
            Emmert-Buck, M.D., Ph.D.
             cDNA Library Preparation: Life Technologies, Inc.
             cDNA Library Arrayed by: Greg Lennon, Ph.D.
             DNA Sequencing by: Washington University Genome Sequencing Center
             Clone distribution: NCI-CGAP clone distribution information can be
            found through the I.M.A.G.E. Consortium/LLNL at:
            www-bio.llnl.gov/bbrp/image/image.html
            Insert Length: 1701   Std Error: 0.00
            Seq primer: -40UP from Gibco
            High quality sequence stop: 1.
FEATURES             Location/Qualifiers
     source          1. .211
                     /organism="Homo sapiens"
                     /mol_type="mRNA"
                     /db_xref="taxon:9606"
                     /clone="IMAGE:2427448"
                     /tissue_type="well-differentiated endometrial
                     adenocarcinoma, 7 pooled tumors"
                     /lab_host="DH10B"
                     /clone_lib="NCI_CGAP_Ut1"
                     /note="Organ: uterus; Vector: pCMV-SPORT6; Site_1: SalI;
                     Site_2: NotI; Cloned unidirectionally.  Primer: Oligo dT.
                     Average insert size 1.75 kb. Life Technologies catalog #:
                     11538-014"
BASE COUNT       54 a     56 c     52 g     47 t      2 others
ORIGIN

  Query Match             100.0%;  Score 12;  DB 9;  Length 211;
  Best Local Similarity   100.0%;  Pred. No. 1.1e+03;
```

```
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db        155 TGCAGCGTTCTC 166


RESULT 11
BE831758/c
LOCUS       BE831758                221 bp    mRNA    linear   EST 22-SEP-2000
DEFINITION  RC0-MT0059-210600-031-a08 MT0059 Homo sapiens cDNA, mRNA sequence.
ACCESSION   BE831758
VERSION     BE831758.1  GI:10264136
KEYWORDS    EST.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 221)
  AUTHORS   Dias Neto,E., Garcia Correa,R., Verjovski-Almeida,S., Briones,M.R.,
            Nagai,M.A., da Silva,W. Jr., Zago,M.A., Bordin,S., Costa,F.F.,
            Goldman,G.H., Carvalho,A.F., Matsukuma,A., Baia,G.S., Simpson,D.H.,
            Brunstein,A., deOliveira,P.S., Bucher,P., Jongeneel,C.V., O'Hare
            ,M.J., Soares,F., Brentani,R.R., Reis,L.F., de Souza,S.J. and
            Simpson,A.J.
  TITLE     Shotgun sequencing of the human transcriptome with ORF expressed
            sequence tags
  JOURNAL   Proc. Natl. Acad. Sci. U.S.A. 97 (7), 3491-3496 (2000)
  MEDLINE   20202663
   PUBMED   10737800
COMMENT     Contact: Simpson A.J.G.
            Laboratory of Cancer Genetics
            Ludwig Institute for Cancer Research
            Rua Prof. Antonio Prudente 109, 4 andar, 01509-010, Sao Paulo-SP,
            Brazil
            Tel: +55-11-2704922
            Fax: +55-11-2707001
            Email: asimpson@ludwig.org.br
            This sequence was derived from the FAPESP/LICR Human Cancer Genome
            Project. This entry can be seen in the following URL
            (http://www.ludwig.org.br/scripts/gethtml2.pl?t1=&t2=RC0-MT0059-210
            600-031-a08&t3=2000-06-21&t4=1)
            Seq primer: puc 18 forward
            High quality sequence start: 24
            High quality sequence stop: 108.
FEATURES             Location/Qualifiers
     source          1. .221
                     /organism="Homo sapiens"
                     /mol_type="mRNA"
                     /db_xref="taxon:9606"
                     /dev_stage="Adult"
                     /clone_lib="MT0059"
                     /note="Organ: marrow; Vector: puc18; Site_1: SmaI; Site_2:
                     SmaI; A mini-library was made by cloning products derived
                     from  ORESTES PCR (U.S. Letters Patent application No. 196
                     ,716 -  Ludwig Institute for Cancer Research) profiles
                     into  the pUC 18 vector. Reverse transcription of tissue
                     mRNA and cDNA amplification were performed under low
                     stringency conditions."
BASE COUNT       65 a     63 c     49 g     44 t
ORIGIN

  Query Match             100.0%;  Score 12;  DB 10;  Length 221;
  Best Local Similarity   100.0%;  Pred. No. 1.1e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db        134 TGCAGCGTTCTC 123


RESULT 12
BM797505/c
LOCUS       BM797505                227 bp    mRNA    linear   EST 05-MAR-2002
DEFINITION  K-EST0080661 S22SNU16n1 Homo sapiens cDNA clone S22SNU16n1-77-B01
            5', mRNA sequence.
ACCESSION   BM797505
VERSION     BM797505.1  GI:19145737
KEYWORDS    EST.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 227)
  AUTHORS   Kim,N.S., Hahn,Y., Oh,J.H., Lee,J.Y., Ahn,H.Y., Chu,M.Y., Kim,M.R.,
            Oh,K.J., Cheong,J.E., Sohn,H.Y., Kim,J.M., Park,H.S., Kim,S. and
            Kim,Y.S.
  TITLE     21C Frontier Korean EST Project 2001
  JOURNAL   Unpublished
COMMENT     Contact: Kim YS
            Genome Research Center
            Korea Research Institute of Bioscience & Biotechnology
            52 Eoeun-dong Yuseong-gu, Daejeon 305-333, South Korea
            Tel: +82-42-860-4470
            Fax: +82-42-860-4409
            Email: yongsung@mail.kribb.re.kr
            Plate: 77  row: B  column: 01
            High quality sequence stop: 227.
FEATURES             Location/Qualifiers
     source          1. .227
                     /organism="Homo sapiens"
                     /mol_type="mRNA"
                     /db_xref="taxon:9606"
                     /clone="S22SNU16n1-77-B01"
                     /sex="F"
                     /tissue_type="Ascites"
                     /cell_type="Lymphoblast-like"
                     /cell_line="SNU-16"
                     /lab_host="DH10B"
                     /clone_lib="S22SNU16n1"
                     /note="Organ: Stomach; Vector: pT7T3-Pac; Site_1: EcoRI;
                     Site_2: NotI; The S22SNU16 library was contributed by the
                     Soares laboratory and it was constructed as described by
                     Bonaldo, M.F., Lennon, G. and Soares, M.B. (1996), Genome
                     Research 6(9): 791-806. RNA was prepared from harvested
                     cells of SNU-16 culture. SNU-16 cell was obtained from
                     Korean Cell Line Bank (KCLB). SNU-16 was established from
                     ascitic fluids of Korean patients by Park J.G. et al.
                     (1990), Cancer Res 50: 2773-2780."
BASE COUNT       46 a     65 c     70 g     46 t
ORIGIN

  Query Match             100.0%;  Score 12;  DB 12;  Length 227;
  Best Local Similarity   100.0%;  Pred. No. 1.1e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db         23 TGCAGCGTTCTC 12


RESULT 13
CA387791/c
LOCUS       CA387791                235 bp    mRNA    linear   EST 06-NOV-2002
DEFINITION  669857 NCCCWA 1RT Oncorhynchus mykiss cDNA clone 1RT164L05_B_F03
            5', mRNA sequence.
ACCESSION   CA387791
VERSION     CA387791.1  GI:24716401
KEYWORDS    EST.
SOURCE      Oncorhynchus mykiss (rainbow trout)
  ORGANISM  Oncorhynchus mykiss
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Actinopterygii; Neopterygii; Teleostei; Euteleostei;
            Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
REFERENCE   1  (bases 1 to 235)
  AUTHORS   Rexroad,C.E. and Keele,J.W.
```

```
  TITLE     Sequence analysis of a rainbow trout normalized cDNA library
  JOURNAL   Unpublished
COMMENT     Contact: Rexroad CE
            USDA, ARS, National Center for Cool and Cold Water Aquaculture
            11876 Leetown Road, Kearneysville, WV 25430, USA
            Tel: 304 724 8340 x2129
            Fax: 304 725 0351
            Email: crexroad@ncccwa.ars.usda.gov
            Single pass sequencing. Bases called with phred v0.020425.c and
            trimmed with the aid of the trim_alt option. Vector identified by
            cross_match v0.990329.
            Seq primer: AGCGGATAACAATTTCACACAGGA.
FEATURES             Location/Qualifiers
     source          1. .235
                     /organism="Oncorhynchus mykiss"
                     /mol_type="mRNA"
                     /db_xref="taxon:8022"
                     /clone="1RT164L05_B_F03"
                     /tissue_type="pooled"
                     /lab_host="DH10B"
                     /clone_lib="NCCCWA 1RT"
                     /note="Vector: pCMV SPORT6; Site_1: NotI; Site_2: SalI;
                     Library made from pooled tissue from brain, gill, liver,
                     spleen, muscle, and kidney."
BASE COUNT       35 a     63 c     88 g     49 t
ORIGIN

  Query Match            100.0%;  Score 12;  DB 14;  Length 235;
  Best Local Similarity  100.0%;  Pred. No. 1.1e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db        156 TGCAGCGTTCTC 145


RESULT 14
AW416284
LOCUS       AW416284                237 bp    mRNA    linear   EST 09-JUL-2000
DEFINITION  51479 MARC 2PIG Sus scrofa cDNA 5', mRNA sequence.
ACCESSION   AW416284
VERSION     AW416284.1  GI:6944166
KEYWORDS    EST.
SOURCE      Sus scrofa (pig)
  ORGANISM  Sus scrofa
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
REFERENCE   1  (bases 1 to 237)
  AUTHORS   Fahrenkrug,S.C., Smith,T.P.L., Freking,B.A., Cho,J., White,J.,
            Vallet,J., Wise,T., Rohrer,G.A., Pertea,G., Sultana,R., Quackenbush
            ,J. and Keele,J.W.
  TITLE     Porcine gene discovery by normalized cDNA-library sequencing and
            EST cluster assembly
  JOURNAL   Mamm. Genome 13 (8), 475-478 (2002)
  MEDLINE   22213789
   PUBMED   12226715
COMMENT     Contact: Smith TPL
            USDA, ARS, US Meat Animal Research Center
            PO Box 166, Clay Center, NE 68933-0166, USA
            Tel: 402 762 4366
            Fax: 402 762 4390
            Email: smith@email.marc.usda.gov
            Single pass sequencing. Bases called and trimmed with phred
            v0.980904.e. Vector identified by cross_match with the -minscore 20
            and -minmatch 12 options.
            PCR PRimers
            FORWARD: AGGAAACAGCTATGACCAT
            BACKWARD: GTTTTCCCAGTCACGACG
            Plate: 24  row: F  column: 6
            Seq primer: ATTTAGGTGACACTATAG.
FEATURES             Location/Qualifiers
     source          1. .237
                     /organism="Sus scrofa"
                     /mol_type="mRNA"
                     /db_xref="taxon:9823"
                     /tissue_type="pooled"
                     /lab_host="DH10B"
                     /clone_lib="MARC 2PIG"
                     /note="Vector: pCMV SPORT6; Site_1: NotI; Site_2: SalI;
                     Library made from pooled tissue from testis, ovary,
                     endometrium, hypothalamus, pituitary, and placenta."
BASE COUNT       50 a     69 c     67 g     51 t
ORIGIN

  Query Match            100.0%;  Score 12;  DB 9;  Length 237;
  Best Local Similarity  100.0%;  Pred. No. 1.1e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db        182 TGCAGCGTTCTC 193


RESULT 15
AZ596456
LOCUS       AZ596456                238 bp    DNA     linear   GSS 13-DEC-2000
DEFINITION  1M0409A18R Mouse 10kb plasmid UUGC1M library Mus musculus genomic
            clone UUGC1M0409A18 R, genomic survey sequence.
ACCESSION   AZ596456
VERSION     AZ596456.1  GI:11718646
KEYWORDS    GSS.
SOURCE      Mus musculus (house mouse)
  ORGANISM  Mus musculus
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
REFERENCE   1  (bases 1 to 238)
  AUTHORS   Dunn,D., Aoyagi,A., Barber,M., Beacorn,T., Duval,B., Hamil,C.,
            Islam,H., Longacre,S., Mahmoud,M., Meenen,E., Pedersen,T., Reilly
            ,M., Rose,M., Rose,R., Stokes,R., Tingey,A., von Niederhausern,A.
            and Wright,D.,Weiss,R.
  TITLE     Mouse whole genome scaffolding with paired end reads from 10kb
            plasmid inserts
  JOURNAL   Unpublished
COMMENT     Contact: Robert B. Weiss
            University of Utah Genome Center
            University of Utah
            Rm. 308, Biomedical Polymers Research Bldg., 20 S. 2030 E., SLC, UT
            84112, USA
            Tel: 801 585 5606
            Fax: 801 585 7177
            Email: ddunn@genetics.utah.edu
            Insert Length: 10000   Std Error: 0.00
            Plate: 0409  row: A  column: 18
            Seq primer: CACACAGGAAACAGCTATGACC
            Class: plasmid ends
            High quality sequence stop: 238.
FEATURES             Location/Qualifiers
     source          1. .238
                     /organism="Mus musculus"
                     /mol_type="genomic DNA"
                     /strain="C57BL/6J"
                     /db_xref="taxon:10090"
                     /clone="UUGC1M0409A18"
                     /sex="Male"
                     /lab_host="E. Coli strain XL10-Gold, T1-resistant, F-"
                     /clone_lib="Mouse 10kb plasmid UUGC1M library"
                     /note="Vector: PWD42nv; Purified genomic DNA from M.
                     musculus C57BL/6J (male) was obtained  from the Jackson
                     Laboratory Mouse DNA Resource
                     (http://www.jax.org/resources/documents/dnares/). The DNA
                     was hydrodynamically sheared by repeated passage through a
                     0.005 inch orifice at constant velocity. The sheared DNA
                     was blunt end-repaired with T4 DNA polymerase and T4
                     polynucleotide kinase. Adaptor oligonucleotides were
                     ligated to the blunt ends in high  molar excess. The
                     adaptored DNA was purified and size-selected for a 9.5 to
```

10.5 kb range using preparative agarose gel
electrophoresis. Vector DNA was prepared from a derivative
of pWD42 (gi|4732114|gb|AF129072.1), a copy-number
inducible derivative of plasmid R1. The vector was ligated
with adaptors complementary to the insert adaptors and
purified. The sheared, adaptored mouse DNA was annealed to
adaptored vector DNA, and transformed into
chemically-competent E. coli XL10-Gold (Stratagene) cells
and selected for ampicillin resistance."
BASE COUNT 57 a 58 c 57 g 66 t
ORIGIN

Query Match 100.0%; Score 12; DB 28; Length 238;
Best Local Similarity 100.0%; Pred. No. 1.1e+03;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db        152 TGCAGCGTTCTC 163
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Search completed: January 20, 2004, 20:01:29
Job time : 736.059 secs

GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: January 20, 2004, 16:34:44 ; Search time 423.882 Seconds
(without alignments)
1158.141 Million cell updates/sec

Title: US-10-068-160-74
Perfect score: 12
Sequence: 1 tgcagcgttctc 12

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 2888711 seqs, 20454813386 residues

Total number of hits satisfying chosen parameters: 5777422

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : GenEmbl:*
1: gb_ba:*
2: gb_htg:*
3: gb_in:*
4: gb_om:*
5: gb_ov:*
6: gb_pat:*
7: gb_ph:*
8: gb_pl:*
9: gb_pr:*
10: gb_ro:*
11: gb_sts:*
12: gb_sy:*
13: gb_un:*
14: gb_vi:*
15: em_ba:*
16: em_fun:*
17: em_hum:*
18: em_in:*
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33: em_htg_mus:*
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35: em_htg_rod:*
36: em_htg_mam:*
37: em_htg_vrt:*
38: em_sy:*
39: em_htgo_hum:*
40: em_htgo_mus:*
41: em_htgo_other:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.		Score	% Query Match	Length	DB	ID	Description
1		12	100.0	12	6	AX194418	AX194418 Sequence
2		12	100.0	12	6	AX465368	AX465368 Sequence
3		12	100.0	20	6	AX104523	AX104523 Sequence
4		12	100.0	20	6	AX194425	AX194425 Sequence
5		12	100.0	20	6	AX355074	AX355074 Sequence
6		12	100.0	20	6	AX465375	AX465375 Sequence
7		12	100.0	20	6	AX547576	AX547576 Sequence
8		12	100.0	38	6	AX030078	AX030078 Sequence
9		12	100.0	38	6	E49388	E49388 Process for
10	c	12	100.0	88	6	AR208640	AR208640 Sequence
11		12	100.0	88	6	AR208641	AR208641 Sequence
12	c	12	100.0	88	6	AR300404	AR300404 Sequence
13		12	100.0	88	6	AR300405	AR300405 Sequence
14	c	12	100.0	88	6	AX000393	AX000393 Sequence
15		12	100.0	88	6	AX000394	AX000394 Sequence
16	c	12	100.0	88	6	AX000554	AX000554 Sequence
17		12	100.0	88	6	AX000555	AX000555 Sequence
18	c	12	100.0	88	6	BD080181	BD080181 Expressio
19		12	100.0	88	6	BD080182	BD080182 Expressio
20		12	100.0	228	9	HSA301497	AJ301497 Homo sapi
21	c	12	100.0	252	6	AX309558	AX309558 Sequence
22		12	100.0	258	6	BD049168	BD049168 Sequence
23	c	12	100.0	264	1	AF499608	AF499608 Microbact
24	c	12	100.0	291	14	AF379408	AF379408 Hepatitis
25	c	12	100.0	293	11	G04342	G04342 human STS W
26	c	12	100.0	310	1	LEU58343	U58343 Lignin enri
27		12	100.0	360	8	CNS019AV	AL111407 Botrytis
28	c	12	100.0	421	6	AR238175	AR238175 Sequence
29	c	12	100.0	421	6	AR257716	AR257716 Sequence
30	c	12	100.0	421	6	AR283762	AR283762 Sequence
31	c	12	100.0	421	6	AX366390	AX366390 Sequence
32		12	100.0	427	6	BD029029	BD029029 Sequence
33		12	100.0	431	6	AX192974	AX192974 Sequence
34		12	100.0	431	6	AX351431	AX351431 Sequence
35	c	12	100.0	435	6	AX340879	AX340879 Sequence
36	c	12	100.0	508	11	BV000093	BV000093 S209P6300
37		12	100.0	530	1	AY192285	AY192285 Unculture
38		12	100.0	612	9	HSA335269	AJ335269 Homo sapi
39	c	12	100.0	617	11	BV021785	BV021785 S212P6047
40		12	100.0	648	11	BV074471	BV074471 S212P6848
41		12	100.0	650	8	AY203028	AY203028 Arabidops
42		12	100.0	662	11	G72218	G72218 Stn191 Stic
43	c	12	100.0	672	8	HAY14429	Y14429 Helianthus
44		12	100.0	692	9	HSA343111	AJ343111 Homo sapi
45	c	12	100.0	720	8	CNS01AJD	AL113009 Botrytis

ALIGNMENTS

RESULT 1
AX194418
LOCUS AX194418 12 bp DNA linear PAT 28-AUG-2001
DEFINITION Sequence 18 from Patent WO0151500.
ACCESSION AX194418
VERSION AX194418.1 GI:15385074
KEYWORDS .
SOURCE synthetic construct
ORGANISM synthetic construct
artificial sequences.
REFERENCE 1
AUTHORS Klinman,D., Ishii,K. and Verthelyi,D.
TITLE Oligodeoxynucleotide and its use to induce an immune response
JOURNAL Patent: WO 0151500-A 18 19-JUL-2001;
Secretary of the Department of Health and Human Services (US)

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FEATURES             Location/Qualifiers
     source          1. .12
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic DNA"
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ORIGIN

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  Best Local Similarity   100.0%;  Pred. No. 5.6e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db          1 TGCAGCGTTCTC 12


RESULT 2
AX465368
LOCUS       AX465368                 12 bp    DNA     linear   PAT 16-JUL-2002
DEFINITION  Sequence 36 from Patent WO0211761.
ACCESSION   AX465368
VERSION     AX465368.1  GI:21899731
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Mond,J.J., Prince,G. and Klinman,D.M.
  TITLE     Vaccine against RSV
  JOURNAL   Patent: WO 0211761-A 36 14-FEB-2002;
            HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY
            MEDICINE (US)
FEATURES             Location/Qualifiers
     source          1. .12
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic oligonucleotide"
BASE COUNT        1 a      4 c      3 g      4 t
ORIGIN

  Query Match             100.0%;  Score 12;  DB 6;  Length 12;
  Best Local Similarity   100.0%;  Pred. No. 5.6e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db          1 TGCAGCGTTCTC 12


RESULT 3
AX104523
LOCUS       AX104523                 20 bp    DNA     linear   PAT 30-APR-2001
DEFINITION  Sequence 715 from Patent WO0122972.
ACCESSION   AX104523
VERSION     AX104523.1  GI:13920720
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Krieg,A.M., Schetter,C. and Vollmer,J.C.
  TITLE     Immunostimulatory nucleic acids
  JOURNAL   Patent: WO 0122972-A 715 05-APR-2001;
            UNIVERSITY OF IOWA RESEARCH FOUNDATION (US) ; Coley Pharmaceutical
            GmbH (DE)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
BASE COUNT        3 a      7 c      4 g      6 t
ORIGIN

  Query Match             100.0%;  Score 12;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 5.6e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db          9 TGCAGCGTTCTC 20


RESULT 4
AX194425
LOCUS       AX194425                 20 bp    DNA     linear   PAT 28-AUG-2001
DEFINITION  Sequence 25 from Patent WO0151500.
ACCESSION   AX194425
VERSION     AX194425.1  GI:15385081
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Klinman,D., Ishii,K. and Verthelyi,D.
  TITLE     Oligodeoxynucleotide and its use to induce an immune response
  JOURNAL   Patent: WO 0151500-A 25 19-JUL-2001;
            Secretary of the Department of Health and Human Services (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic DNA"
BASE COUNT        3 a      7 c      4 g      6 t
ORIGIN

  Query Match             100.0%;  Score 12;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 5.6e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db          9 TGCAGCGTTCTC 20


RESULT 5
AX355074
LOCUS       AX355074                 20 bp    DNA     linear   PAT 06-FEB-2002
DEFINITION  Sequence 102 from Patent WO0197843.
ACCESSION   AX355074
VERSION     AX355074.1  GI:18619741
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Weiner,G. and Hartmann,G.
  TITLE     Methods for enhancing antibody-induced cell lysis and treating
            cancer
  JOURNAL   Patent: WO 0197843-A 102 27-DEC-2001;
            UNIVERSITY OF IOWA RESEARCH FOUNDATION (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic oligonucleotide-phosphodiester backbone"
BASE COUNT        3 a      7 c      4 g      6 t
ORIGIN

  Query Match             100.0%;  Score 12;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 5.6e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;
```

```
Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db          9 TGCAGCGTTCTC 20


RESULT 6
AX465375
LOCUS       AX465375                  20 bp    DNA     linear   PAT 16-JUL-2002
DEFINITION  Sequence 43 from Patent WO0211761.
ACCESSION   AX465375
VERSION     AX465375.1  GI:21899738
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Mond,J.J., Prince,G. and Klinman,D.M.
  TITLE     Vaccine against RSV
  JOURNAL   Patent: WO 0211761-A 43 14-FEB-2002;
            HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY
            MEDICINE (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic oligonucleotide"
BASE COUNT        3 a      7 c      4 g      6 t
ORIGIN

  Query Match             100.0%;  Score 12;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 5.6e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db          9 TGCAGCGTTCTC 20


RESULT 7
AX547576
LOCUS       AX547576                  20 bp    DNA     linear   PAT 26-NOV-2002
DEFINITION  Sequence 715 from Patent WO02053141.
ACCESSION   AX547576
VERSION     AX547576.1  GI:25812720
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Bratzler,R.L.
  TITLE     Inhibition of angiogenesis by nucleic acids
  JOURNAL   Patent: WO 02053141-A 715 11-JUL-2002;
            Coley Pharmaceutical Group, Inc. (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic Sequence"
BASE COUNT        3 a      7 c      4 g      6 t
ORIGIN

  Query Match             100.0%;  Score 12;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 5.6e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db          9 TGCAGCGTTCTC 20


RESULT 8
AX030078
LOCUS       AX030078                  38 bp    DNA     linear   PAT 16-SEP-2000
DEFINITION  Sequence 8 from Patent EP1016710.
ACCESSION   AX030078
VERSION     AX030078.1  GI:10190295
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Nakanishi,K., Aleshin,V.V., Livshits,V.A., Tokhmakova,I.L.,
            Troshin,P.V. and Zakataeva,N.P.
  TITLE     Method for producing l-amino acids
  JOURNAL   Patent: EP 1016710-A 8 05-JUL-2000;
            AJINOMOTO KK (JP)
FEATURES             Location/Qualifiers
     source          1. .38
                     /organism="synthetic construct"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32630"
                     /note="primer for amplifying Escherichia coli yggA gene"
BASE COUNT        7 a      12 c     10 g      9 t
ORIGIN

  Query Match             100.0%;  Score 12;  DB 6;  Length 38;
  Best Local Similarity   100.0%;  Pred. No. 5.6e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db          8 TGCAGCGTTCTC 19


RESULT 9
E49388
LOCUS       E49388                    38 bp    DNA     linear   PAT 31-JAN-2002
DEFINITION  Process for producing L-amino acid.
ACCESSION   E49388
VERSION     E49388.1  GI:18628079
KEYWORDS    JP 2000189180-A/8.
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1  (bases 1 to 38)
  AUTHORS   Rivishittsu,V.A., Zakataeva,N.P., Nakanishi,K., Aryoshin,V.V.,
            Toroshin,P.V. and Tokumakova,I.R.
  TITLE     Process for producing L-amino acid
  JOURNAL   Patent: JP 2000189180-A 8 11-JUL-2000;
            AJINOMOTO CO INC
COMMENT     OS   Artificial Sequence
            PN   JP 2000189180-A/8
            PD   11-JUL-2000
            PF   28-DEC-1999 JP 1999373651
            PR   30-DEC-1998 RU     98124016,09-MAR-1999 RU     99104431 PI
            VITARI ARUKAJEVICHI RIVISHITTSU,NATARIYA PAVUROVUNA
             ZAKATAEVA,
            PI   KAZUO NAKANISHI,VLADIMIR VENIYAMINOVICHI ARYOSHIN, PI   PETER
            VIRAJIMIROVICCHI TOROSHIN,IRINA RIVOVUNA TOKUMAKOVA PC
            C12N15/09,C12N1/21,C12P13/04//(C12N1/21,C12R1:19),(C12P13/04, PC
            C12R1:19),
            PC   C12N15/00
            CC
            FH   Key             Location/Qualifiers
            FT   source          1. .38
            FT                   /organism='Artificial Sequence'.
FEATURES             Location/Qualifiers
     source          1. .38
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                     /db_xref="taxon:32630"
BASE COUNT        7 a      12 c     10 g      9 t
ORIGIN
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  Query Match             100.0%;  Score 12;  DB 6;  Length 38;
  Best Local Similarity   100.0%;  Pred. No. 5.6e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db          8 TGCAGCGTTCTC 19


RESULT 10
AR208640/c
LOCUS       AR208640                 88 bp    DNA     linear   PAT 20-JUN-2002
DEFINITION  Sequence 12 from patent US 6383782.
ACCESSION   AR208640
VERSION     AR208640.1  GI:21509847
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 88)
  AUTHORS   Barratt,D.Graham. and Needham,M.Ronald.Charles.
  TITLE     MCP-1 analogs
  JOURNAL   Patent: US 6383782-A 12 07-MAY-2002;
FEATURES             Location/Qualifiers
     source          1. .88
                     /organism="unknown"
BASE COUNT       29 a     20 c     18 g     21 t
ORIGIN

  Query Match             100.0%;  Score 12;  DB 6;  Length 88;
  Best Local Similarity   100.0%;  Pred. No. 5.6e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db         65 TGCAGCGTTCTC 54


RESULT 11
AR208641
LOCUS       AR208641                 88 bp    DNA     linear   PAT 20-JUN-2002
DEFINITION  Sequence 13 from patent US 6383782.
ACCESSION   AR208641
VERSION     AR208641.1  GI:21509848
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 88)
  AUTHORS   Barratt,D.Graham. and Needham,M.Ronald.Charles.
  TITLE     MCP-1 analogs
  JOURNAL   Patent: US 6383782-A 13 07-MAY-2002;
FEATURES             Location/Qualifiers
     source          1. .88
                     /organism="unknown"
BASE COUNT       20 a     19 c     21 g     28 t
ORIGIN

  Query Match             100.0%;  Score 12;  DB 6;  Length 88;
  Best Local Similarity   100.0%;  Pred. No. 5.6e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db         28 TGCAGCGTTCTC 39


RESULT 12
AR300404/c
LOCUS       AR300404                 88 bp    DNA     linear   PAT 12-JUN-2003
DEFINITION  Sequence 3 from patent US 6537779.
ACCESSION   AR300404
VERSION     AR300404.1  GI:31687841
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 88)
  AUTHORS   Kara,B.V., Pioli,D., Bundell,K.R. and Hockney,R.C.
  TITLE     T7 promoter-based expression system
  JOURNAL   Patent: US 6537779-A 3 25-MAR-2003;
FEATURES             Location/Qualifiers
     source          1. .88
                     /organism="unknown"
BASE COUNT       29 a     20 c     18 g     21 t
ORIGIN

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  Best Local Similarity   100.0%;  Pred. No. 5.6e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db         65 TGCAGCGTTCTC 54


RESULT 13
AR300405
LOCUS       AR300405                 88 bp    DNA     linear   PAT 12-JUN-2003
DEFINITION  Sequence 4 from patent US 6537779.
ACCESSION   AR300405
VERSION     AR300405.1  GI:31687842
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 88)
  AUTHORS   Kara,B.V., Pioli,D., Bundell,K.R. and Hockney,R.C.
  TITLE     T7 promoter-based expression system
  JOURNAL   Patent: US 6537779-A 4 25-MAR-2003;
FEATURES             Location/Qualifiers
     source          1. .88
                     /organism="unknown"
BASE COUNT       20 a     19 c     21 g     28 t
ORIGIN

  Query Match             100.0%;  Score 12;  DB 6;  Length 88;
  Best Local Similarity   100.0%;  Pred. No. 5.6e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db         28 TGCAGCGTTCTC 39


RESULT 14
AX000393/c
LOCUS       AX000393                 88 bp    DNA     linear   PAT 10-MAR-2000
DEFINITION  Sequence 3 from Patent WO9905297.
ACCESSION   AX000393
VERSION     AX000393.1  GI:7240804
KEYWORDS    .
SOURCE      unidentified
  ORGANISM  unidentified
            unclassified.
REFERENCE   1  (bases 1 to 88)
  AUTHORS   Pioli,D. and Bundell,K.R.
  TITLE     T7 PROMOTER-BASED EXPRESSION SYSTEM
  JOURNAL   Patent: WO 9905297-A 3 04-FEB-1999;
            PIOLI DAVID (GB); ZENECA LTD (GB)
FEATURES             Location/Qualifiers
     source          1. .88
                     /organism="unidentified"
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BASE COUNT       29 a     20 c     18 g     21 t
ORIGIN

  Query Match             100.0%;  Score 12;  DB 6;  Length 88;
  Best Local Similarity   100.0%;  Pred. No. 5.6e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db         65 TGCAGCGTTCTC 54


RESULT 15
AX000394
LOCUS       AX000394                 88 bp    DNA     linear   PAT 10-MAR-2000
DEFINITION  Sequence 4 from Patent WO9905297.
ACCESSION   AX000394
VERSION     AX000394.1  GI:7240805
KEYWORDS    .
SOURCE      unidentified
  ORGANISM  unidentified
            unclassified.
REFERENCE   1  (bases 1 to 88)
  AUTHORS   Pioli,D. and Bundell,K.R.
  TITLE     T7 PROMOTER-BASED EXPRESSION SYSTEM
  JOURNAL   Patent: WO 9905297-A 4 04-FEB-1999;
            PIOLI DAVID (GB); ZENECA LTD (GB)
FEATURES             Location/Qualifiers
     source          1. .88
                     /organism="unidentified"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32644"
BASE COUNT       20 a     19 c     21 g     28 t
ORIGIN

  Query Match             100.0%;  Score 12;  DB 6;  Length 88;
  Best Local Similarity   100.0%;  Pred. No. 5.6e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db         28 TGCAGCGTTCTC 39


Search completed: January 20, 2004, 17:15:10
Job time : 428.882 secs
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GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: January 20, 2004, 16:34:44 ; Search time 74.8235 Seconds
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Title: US-10-068-160-74
Perfect score: 12
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Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 2552756 seqs, 1349719017 residues

Total number of hits satisfying chosen parameters: 5105512

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Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	12	100.0	12	22	AAS09568	Immunoreactive CpG
2	12	100.0	12	22	AAC80598	Immunogenic CpG ol
3	12	100.0	12	24	ABK46446	Immunostimulatory
4	12	100.0	20	22	AAS09575	Immunoreactive CpG
5	12	100.0	20	22	AAF99516	Immunostimulatory
6	12	100.0	20	22	AAC80605	Immunogenic CpG ol
7	12	100.0	20	24	ABS78231	Angiogenesis inhib
8	12	100.0	20	24	ABK46453	Immunostimulatory
9	12	100.0	20	24	ABL38734	Immunostimulatory
10	12	100.0	38	21	AAA52687	Escherichia coli y
c 11	12	100.0	88	20	AAX21528	Vector pZT7#3.3 co
12	12	100.0	88	20	AAX21529	Vector pZT7#3.3 co
13	12	100.0	177	22	AAL02385	Human reproductive
c 14	12	100.0	252	24	ABN76325	Human transcriptio
c 15	12	100.0	254	20	AAX37307	Human breast-speci
16	12	100.0	258	21	AAC25423	Human secreted pro
17	12	100.0	353	24	ABN25861	Human ORFX polynuc
c 18	12	100.0	375	25	ABX36533	Bovine EST associa
c 19	12	100.0	417	24	ABN91391	Staphylococcus epi
c 20	12	100.0	421	21	AAA69847	Human ovarian carc
c 21	12	100.0	421	24	ABN72741	Ovarian carcinoma
22	12	100.0	427	21	AAC05284	Human secreted pro
23	12	100.0	431	22	AAI28992	Colon tumour relat
24	12	100.0	431	24	ABK27741	Human colon cancer
25	12	100.0	431	25	ABZ33178	Human colon tumour
c 26	12	100.0	435	24	ABL37537	Human colon tumour
27	12	100.0	449	23	AAS92959	DNA encoding novel
c 28	12	100.0	501	21	AAC45707	Arabidopsis thalia
c 29	12	100.0	575	21	AAC45194	Arabidopsis thalia
30	12	100.0	658	21	AAZ80112	Human colon cancer
c 31	12	100.0	669	22	AAL10209	Human breast cance
c 32	12	100.0	717	21	AAF13512	Aspergillus oryzae
c 33	12	100.0	769	24	ABQ66897	Human SFRS protein
c 34	12	100.0	831	22	AAL19789	Human breast cance
35	12	100.0	871	24	ABN98794	Arabidopsis thalia
c 36	12	100.0	933	23	ABL04787	Drosophila melanog
37	12	100.0	966	23	AAS88065	DNA encoding novel
c 38	12	100.0	975	22	AAH67500	C glutamicum codin
c 39	12	100.0	981	23	AAS92962	DNA encoding novel
40	12	100.0	1147	22	AAL26726	Human breast cance
c 41	12	100.0	1179	21	AAA54126	Breast cancer prot
42	12	100.0	1218	23	AAS87399	DNA encoding novel
c 43	12	100.0	1229	23	ABL21189	Drosophila melanog
44	12	100.0	1265	23	ABL03125	Drosophila melanog
45	12	100.0	1349	21	AAC38732	Arabidopsis thalia

ALIGNMENTS

RESULT 1
AAS09568
ID AAS09568 standard; DNA; 12 BP.
XX
AC AAS09568;
XX
DT 26-SEP-2001 (first entry)
XX
DE Immunoreactive CpG sequence-containing oligonucleotide #18.
XX
KW CpG sequence; immune response; non-B cell activation; interferon gamma;
KW IFN-gamma; humoral; antibody production; interleukin-6 production;
KW therapeutic; allergy; asthma; cancer; autoimmune disorder; infection;
KW bio-warfare; vaccine; antisense therapy; eczema; allergic rhinitis;
KW coryza; hay fever; urticaria; hives; food allergy; atopic condition;
KW hepatitis; human immunodeficiency virus; HIV; malaria; Francisella;
KW lupus erythematosus; rheumatoid arthritis; multiple sclerosis;
KW schistosomiasis; tuberculosis; acquired immunodeficiency syndrome; AIDS;
KW Leishmania; Ebola; Anthrax; Listeria; ss.
XX
OS Synthetic.
XX
PN WO200151500-A1.
XX
PD 19-JUL-2001.
XX
PF 12-JAN-2001; 2001WO-US01122.
XX
PR 14-JAN-2000; 2000US-0176115.
XX
PA (USSH) US DEPT HEALTH & HUMAN SERVICES.

XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-442129/47.
XX
PT Oligodeoxynucleotides for inducing an immune response to treat and
PT prevent an allergic reaction, cancer, an autoimmune disorder and
PT symptoms resulting from exposure to bio-warfare agents, comprise
PT multiple CpG sequences -
XX
PS Claim 5; Page 30; 48pp; English.
XX
CC AAS09551-AAS09662 represent oligodeoxynucleotides (ODN) of at least 10
CC nucleotides comprising multiple CpG sequences, where one of the CpG
CC sequences is different from another of the multiple CpG sequences.
CC The ODN are useful for inducing an immune response, preferably a cell-
CC mediated immune response, involving non-B cell activation, interferon
CC gamma (IFN-gamma) production or a humoral immune response involving B
CC cell activation, antibody and interleukin-6 production in a host, for
CC treating, preventing or ameliorating an allergic reaction, e.g. asthma,
CC cancer, e.g. solid tumour cancer, a disease associated with the immune
CC system e.g. autoimmune disorder or an immune system deficiency, infection
CC or a symptom resulting from exposure to bio-warfare agent in a human. The
CC induction of immune response improves the efficacy of a vaccine and is
CC used in antisense therapy. The ODN are useful for treating, preventing or
CC ameliorating allergic reactions, including eczema, allergic rhinitis or
CC coryza, hay fever, bronchial asthma, urticaria (hives), food allergies
CC and other atopic conditions, for improving the efficacy of vaccines
CC against hepatitis A, B and C, human immunodeficiency virus (HIV) and
CC malaria, for treating immune system deficiencies, e.g. lupus
CC erythematosus and autoimmune diseases such as rheumatoid arthritis and
CC multiple sclerosis, infections including Francisella, schistosomiasis,
CC tuberculosis, acquired immunodeficiency syndrome (AIDS), Leishmania and
CC symptoms resulting from exposure of bio-warfare agent, including Ebola,
CC Anthrax and Listeria.
XX
SQ Sequence 12 BP; 1 A; 4 C; 3 G; 4 T; 0 other;

Query Match 100.0%; Score 12; DB 22; Length 12;
Best Local Similarity 100.0%; Pred. No. 8.8e+02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TGCAGCGTTCTC 12
||||||||||||
Db 1 TGCAGCGTTCTC 12

RESULT 2
AAC80598
ID AAC80598 standard; DNA; 12 BP.
XX
AC AAC80598;
XX
DT 14-FEB-2001 (first entry)
XX
DE Immunogenic CpG oligodeoxynucleotide, SEQ ID NO:18.
XX
KW CpG oligodeoxynucleotide; unmethylated; antigen-presenting cell;
KW immunogenic; cytokine release; natural killer cell; NK cell activation;
KW cell-mediated immune response; T-cell response; humoral response;
KW B-cell response; antibody production; immune response induction;
KW vaccine; allergy; asthma; infection; bacterial; viral; fungal; protozoal;
KW parasitic; tuberculosis; AIDS; autoimmune disease; lupus erythematosus;
KW rheumatoid arthritis; multiple sclerosis; solid tumour; cancer;
KW immune deficiency; biological warfare agent; cytostatic; antiarthritic;
KW antimicrobial; antiallergic; protozoacide; tuberculostatic;
KW antiasthmatic; dermatological; phosphorothioate; ss.
XX
OS Synthetic.
XX
PN WO200061151-A2.
XX
PD 19-OCT-2000.
XX
PF 12-APR-2000; 2000WO-US09839.
XX
PR 12-APR-1999; 99US-0128898.
XX
PA (KLIN/) KLINMAN D.
PA (ISHI/) ISHII K.
PA (VERT/) VERTHELYI D.
XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-006880/01.
XX
PT Novel oligonucleotides useful for the prevention and treatment of
PT allergies, cancer, and autoimmune disorders and for ameliorating
PT symptoms resulting from exposure to a bio-warfare agent -
XX
PS Claim 4; Page 27; 46pp; English.
XX
CC The invention relates to novel immunogenic CpG oligodeoxynucleotides
CC (AAC80581-C80723). The oligonucleotide are at least 10 bases long
CC and comprise one of the generic sequences 5'-NNNT-CpG-WNNN-3' or
CC 5'-RY-CpG-RY-3'. The central CpG motif is unmethylated, and the
CC oligonucleotides optionally have phosphorothioate linkages which make
CC them more resistant to degradation. The invention also relates to an
CC oligonucleotide delivery complex comprising an oligonucleotide of the
CC invention and a targetting agent, and a pharmaceutical composition
CC comprising the oligonucleotide delivery complex. The oligonucleotides
CC are able to induce either a cell-mediated (T-cell) response or a humoral
CC (B-cell, antibody) response, with oligonucleotides of the sequence
CC 5'-RY-CpG-RY-3' being able to induce a cell-mediated response, and those
CC of the sequence 5'-NNNT-CpG-WNNN-3' being able to induce a humoral
CC response. It is thought that after administration, the oligonucleotide
CC acts on antigen-presenting cells (e.g., macrophages and dendritic
CC cells), which then release cytokines, leading to activation of natural
CC killer (NK) cells. A cell-mediated or humoral response can then occur by
CC activation of T- or B-cells. The induction of an immune response is
CC useful for treating, preventing or ameliorating an allergic reaction
CC (preferably asthma), or an infection, where an immunogenic CpG
CC oligonucleotide is administered either alone or in combination with an
CC anti-allergenic agent or anti-infectious agent. The allergic conditions
CC which may be treated include eczema, allergic rhinitis, hayfever,
CC urticaria, food allergies and other atopic conditions, and the
CC infections which may be treated include viral, bacterial, fungal and
CC protozoal infections such as tuberculosis, AIDS, leishmania and
CC schistosomiasis. Immune response induction may also be used in the
CC treatment of an autoimmune disorder (e.g., lupus erythematosus,
CC rheumatoid arthritis and multiple sclerosis), a disease associated with
CC immune system deficiency, and symptoms resulting from exposure to an
CC agent of biological warfare. An immunogenic CpG oligonucleotide, either
CC alone or in combination with an anti-cancer agent, is useful for treating
CC solid tumour cancer. The induction of an immune response is used in
CC antisense therapy and to improve the efficacy of a vaccine. The
CC oligonucleotide is preferably administered to lymphocytes ex vivo,
CC producing activated lymphocytes which are then administered to the host.
CC The present sequence represents an immunogenic CpG oligodeoxynucleotide
CC of the invention.
XX
SQ Sequence 12 BP; 1 A; 4 C; 3 G; 4 T; 0 other;

Query Match 100.0%; Score 12; DB 22; Length 12;
Best Local Similarity 100.0%; Pred. No. 8.8e+02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TGCAGCGTTCTC 12
||||||||||||
Db 1 TGCAGCGTTCTC 12

RESULT 3
ABK46446
ID ABK46446 standard; DNA; 12 BP.
XX

AC ABK46446;
XX
DT 05-JUN-2002 (first entry)
XX
DE Immunostimulatory unmethylated CpG oligodideoxynucleotide #36.
XX
KW unmethylated CpG; oligdideoxynucleotide; ODN; virucide; vaccine;
KW Paramyxoviridae; F protein; respiratory syncytial virus; RSV;
KW viral bronchiolitis; pneumonia; infectious pulmonary disease;
KW bronchopulmonary dysplasia; congenital heart condition; ss.
XX
OS Synthetic.
XX
PN WO200211761-A2.
XX
PD 14-FEB-2002.
XX
PF 09-AUG-2001; 2001WO-US41633.
XX
PR 10-AUG-2000; 2000US-224011P.
PR 01-SEP-2000; 2000US-229307P.
XX
PA (JACK-) JACKSON FOUND ADVANCEMENT MILITARY MED.
XX
PI Mond JJ, Prince G, Klinman DM;
XX
DR WPI; 2002-227118/28.
XX
PT Vaccine for immunising patient against respiratory syncytial virus, has
PT epitopes of Paramyxoviridae F protein, and cytosine followed by guanine
PT linked by phosphate bond-oligodideoxynucleotides -
XX
PS Claim 4; Page 7; 30pp; English.
XX
CC The invention describes a vaccine comprising one or more epitopes of a
CC Paramyxoviridae F protein, and one or more CpG (cytosine followed by
CC guanine linked by phosphate bond)-oligodideoxynucleotides (ODNs). The
CC vaccine is useful for vaccinating a patient especially against viruses
CC of the Paramyxoviridae family e.g. respiratory syncytial virus (RSV),
CC the primary cause of viral bronchiolitis and pneumonia in infants and
CC children, and infectious pulmonary disease in infants. RSV has been
CC particularly implicated in death of infants that are premature, have
CC bronchopulmonary dysplasia, or congenital heart conditions. This
CC sequence represents an oligodideoxynucleotide that can be used in the
CC creation of the vaccine.
XX
SQ Sequence 12 BP; 1 A; 4 C; 3 G; 4 T; 0 other;

Query Match 100.0%; Score 12; DB 24; Length 12;
Best Local Similarity 100.0%; Pred. No. 8.8e+02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TGCAGCGTTCTC 12
||||||||||||
Db 1 TGCAGCGTTCTC 12

RESULT 4
AAS09575
ID AAS09575 standard; DNA; 20 BP.
XX
AC AAS09575;
XX
DT 26-SEP-2001 (first entry)
XX
DE Immunoreactive CpG sequence-containing oligonucleotide #25.
XX
KW CpG sequence; immune response; non-B cell activation; interferon gamma;
KW IFN-gamma; humoral; antibody production; interleukin-6 production;
KW therapeutic; allergy; asthma; cancer; autoimmune disorder; infection;
KW bio-warfare; vaccine; antisense therapy; eczema; allergic rhinitis;
KW coryza; hay fever; urticaria; hives; food allergy; atopic condition;
KW hepatitis; human immunodeficiency virus; HIV; malaria; Francisella;
KW lupus erythematosus; rheumatoid arthritis; multiple sclerosis;
KW schistosomiasis; tuberculosis; acquired immunodeficiency syndrome; AIDS;
KW Leishmania; Ebola; Anthrax; Listeria; ss.
XX
OS Synthetic.
XX
PN WO200151500-A1.
XX
PD 19-JUL-2001.
XX
PF 12-JAN-2001; 2001WO-US01122.
XX
PR 14-JAN-2000; 2000US-0176115.
XX
PA (USSH) US DEPT HEALTH & HUMAN SERVICES.
XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-442129/47.
XX
PT Oligodeoxynucleotides for inducing an immune response to treat and
PT prevent an allergic reaction, cancer, an autoimmune disorder and
PT symptoms resulting from exposure to bio-warfare agents, comprise
PT multiple CpG sequences -
XX
PS Claim 5; Page 31; 48pp; English.
XX
CC AAS09551-AAS09662 represent oligodeoxynucleotides (ODN) of at least 10
CC nucleotides comprising multiple CpG sequences, where one of the CpG
CC sequences is different from another of the multiple CpG sequences.
CC The ODN are useful for inducing an immune response, preferably a cell-
CC mediated immune response, involving non-B cell activation, interferon
CC gamma (IFN-gamma) production or a humoral immune response involving B
CC cell activation, antibody and interleukin-6 production in a host, for
CC treating, preventing or ameliorating an allergic reaction, e.g. asthma,
CC cancer, e.g. solid tumour cancer, a disease associated with the immune
CC system e.g. autoimmune disorder or an immune system deficiency, infection
CC or a symptom resulting from exposure to bio-warfare agent in a human. The
CC induction of immune response improves the efficacy of a vaccine and is
CC used in antisense therapy. The ODN are useful for treating, preventing or
CC ameliorating allergic reactions, including eczema, allergic rhinitis or
CC coryza, hay fever, bronchial asthma, urticaria (hives), food allergies
CC and other atopic conditions, for improving the efficacy of vaccines
CC against hepatitis A, B and C, human immunodeficiency virus (HIV) and
CC malaria, for treating immune system deficiencies, e.g. lupus
CC erythematosus and autoimmune diseases such as rheumatoid arthritis and
CC multiple sclerosis, infections including Francisella, schistosomiasis,
CC tuberculosis, acquired immunodeficiency syndrome (AIDS), Leishmania and
CC symptoms resulting from exposure of bio-warfare agent, including Ebola,
CC Anthrax and Listeria.
XX
SQ Sequence 20 BP; 3 A; 7 C; 4 G; 6 T; 0 other;

Query Match 100.0%; Score 12; DB 22; Length 20;
Best Local Similarity 100.0%; Pred. No. 9e+02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TGCAGCGTTCTC 12
||||||||||||
Db 9 TGCAGCGTTCTC 20

RESULT 5
AAF99516
ID AAF99516 standard; DNA; 20 BP.
XX
AC AAF99516;
XX
DT 12-JUN-2001 (first entry)
XX
DE Immunostimulatory nucleic acid #632.
XX
KW Vaccine; cytostatic; virucidal; bactericidal; fungicidal; anti-parasitic;

KW immunostimulatory; tumour; viral infection; bacterial infection;
KW fungal infection; parasitic infection; cancer; asthma;
KW infectious disease; allergy; immune deficiency; phosphorothioate; ss.
XX
OS Synthetic.
XX
PN WO200122972-A2.
XX
PD 05-APR-2001.
XX
PF 25-SEP-2000; 2000WO-US26383.
XX
PR 25-SEP-1999; 99US-0156113.
PR 27-SEP-1999; 99US-0156135.
PR 23-AUG-2000; 2000US-0227436.
XX
PA (IOWA) UNIV IOWA RES FOUND.
PA (COLE-) COLEY PHARM GMBH.
XX
PI Krieg AM, Schetter C, Vollmer J;
XX
DR WPI; 2001-273485/28.
XX
PT Vaccinating against tumors, infectious diseases, allergies and asthma
PT using immunostimulatory Py-rich and TG nucleic acids -
XX
PS Claim 101; Page 52; 338pp; English.
XX
CC The present invention relates to a method for stimulating an immune
CC response. The method comprises administering an immunostimulatory nucleic
CC acid to a non-rodent subject in sufficient quantity to stimulate an
CC immune response. The present sequence is one such immunostimulatory
CC nucleic acid. The immunostimulatory nucleic acids can be pyrimidine rich
CC (py-rich) or thymidine (T) rich. The method is used to vaccinate subjects
CC against tumour antigens, viral antigens (e.g. herpesviridae, retroviridae
CC and/or orthomyxoviridae), bacterial antigens (e.g. toxoplasma,
CC haemophilus, campylobacter, clostridium, Escherichia coli and/or
CC staphylococcus), fungal antigens and/or parasitic antigens. The method is
CC also useful for preventing cancer, asthma, infectious disease, allergy or
CC immune deficiency. The present sequence can also be used to redirect a
CC Th2 to a Th1 immune response and to activate immune cells.
CC Note: the present sequence may have a phosphorothioate backbone.
XX
SQ Sequence 20 BP; 3 A; 7 C; 4 G; 6 T; 0 other;

Query Match 100.0%; Score 12; DB 22; Length 20;
Best Local Similarity 100.0%; Pred. No. 9e+02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TGCAGCGTTCTC 12
||||||||||||
Db 9 TGCAGCGTTCTC 20

RESULT 6
AAC80605
ID AAC80605 standard; DNA; 20 BP.
XX
AC AAC80605;
XX
DT 14-FEB-2001 (first entry)
XX
DE Immunogenic CpG oligodeoxynucleotide, SEQ ID NO:25.
XX
KW CpG oligodeoxynucleotide; unmethylated; antigen-presenting cell;
KW immunogenic; cytokine release; natural killer cell; NK cell activation;
KW cell-mediated immune response; T-cell response; humoral response;
KW B-cell response; antibody production; immune response induction;
KW vaccine; allergy; asthma; infection; bacterial; viral; fungal; protozoal;
KW parasitic; tuberculosis; AIDS; autoimmune disease; lupus erythematosus;
KW rheumatoid arthritis; multiple sclerosis; solid tumour; cancer;
KW immune deficiency; biological warfare agent; cytostatic; antiarthritic;
KW antimicrobial; antiallergic; protozoacide; tuberculostatic;
KW antiasthmatic; dermatological; phosphorothioate; ss.
XX
OS Synthetic.
XX
PN WO200061151-A2.
XX
PD 19-OCT-2000.
XX
PF 12-APR-2000; 2000WO-US09839.
XX
PR 12-APR-1999; 99US-0128898.
XX
PA (KLIN/) KLINMAN D.
PA (ISHI/) ISHII K.
PA (VERT/) VERTHELYI D.
XX
PI Klinman D, Ishii K, Verthelyi D;
XX
DR WPI; 2001-006880/01.
XX
PT Novel oligonucleotides useful for the prevention and treatment of
PT allergies, cancer, and autoimmune disorders and for ameliorating
PT symptoms resulting from exposure to a bio-warfare agent -
XX
PS Claim 4; Page 28; 46pp; English.
XX
CC The invention relates to novel immunogenic CpG oligodeoxynucleotides
CC (AAC80581-C80723). The oligonucleotide are at least 10 bases long
CC and comprise one of the generic sequences 5'-NNNT-CpG-WNNN-3' or
CC 5'-RY-CpG-RY-3'. The central CpG motif is unmethylated, and the
CC oligonucleotides optionally have phosphorothioate linkages which make
CC them more resistant to degradation. The invention also relates to an
CC oligonucleotide delivery complex comprising an oligonucleotide of the
CC invention and a targetting agent, and a pharmaceutical composition
CC comprising the oligonucleotide delivery complex. The oligonucleotides
CC are able to induce either a cell-mediated (T-cell) response or a humoral
CC (B-cell, antibody) response, with oligonucleotides of the sequence
CC 5'-RY-CpG-RY-3' being able to induce a cell-mediated response, and those
CC of the sequence 5'-NNNT-CpG-WNNN-3' being able to induce a humoral
CC response. It is thought that after administration, the oligonucleotide
CC acts on antigen-presenting cells (e.g., macrophages and dendritic
CC cells), which then release cytokines, leading to activation of natural
CC killer (NK) cells. A cell-mediated or humoral response can then occur by
CC activation of T- or B-cells. The induction of an immune response is
CC useful for treating, preventing or ameliorating an allergic reaction
CC (preferably asthma), or an infection, where an immunogenic CpG
CC oligonucleotide is administered either alone or in combination with an
CC anti-allergenic agent or anti-infectious agent. The allergic conditions
CC which may be treated include eczema, allergic rhinitis, hayfever,
CC urticaria, food allergies and other atopic conditions, and the
CC infections which may be treated include viral, bacterial, fungal and
CC protozoal infections such as tuberculosis, AIDS, leishmania and
CC schistosomiasis. Immune response induction may also be used in the
CC treatment of an autoimmune disorder (e.g., lupus erythematosus,
CC rheumatoid arthritis and multiple sclerosis), a disease associated with
CC immune system deficiency, and symptoms resulting from exposure to an
CC agent of biological warfare. An immunogenic CpG oligonucleotide, either
CC alone or in combination with an anti-cancer agent, is useful for treating
CC solid tumour cancer. The induction of an immune response is used in
CC antisense therapy and to improve the efficacy of a vaccine. The
CC oligonucleotide is preferably administered to lymphocytes ex vivo,
CC producing activated lymphocytes which are then administered to the host.
CC The present sequence represents an immunogenic CpG oligodeoxynucleotide
CC of the invention.
XX
SQ Sequence 20 BP; 3 A; 7 C; 4 G; 6 T; 0 other;

Query Match 100.0%; Score 12; DB 22; Length 20;
Best Local Similarity 100.0%; Pred. No. 9e+02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TGCAGCGTTCTC 12
||||||||||||

```
Db          9 TGCAGCGTTCTC 20


RESULT 7
ABS78231
ID   ABS78231 standard; DNA; 20 BP.
XX
AC   ABS78231;
XX
DT   13-DEC-2002  (first entry)
XX
DE   Angiogenesis inhibitory oligonucleotide #715.
XX
KW   Angiogenesis inhibitor; ss; angiogenesis; solid tumour growth;
KW   tumour metastasis; precancerous lesion; rheumatoid arthritis;
KW   psoriasis; diabetic retinopathy; retinopathy of prematurity;
KW   macular degeneration; corneal graft rejection; neovascular glaucoma;
KW   retrolental fibroplasia; rubeosis; Osler-Webber Syndrome;
KW   myocardial angiogenesis; plaque neovascularisation; telangiectasia;
KW   haemophiliac joint; angiofibroma; wound granulation;
KW   intestinal adhesion; atherosclerosis; scleroderma; hypertrophic scar.
XX
OS   Synthetic.
XX
PN   WO200253141-A2.
XX
PD   11-JUL-2002.
XX
PF   14-DEC-2001; 2001WO-US48458.
XX
PR   14-DEC-2000; 2000US-255534P.
XX
PA   (COLE-) COLEY PHARM GROUP INC.
XX
PI   Bratzler RL;
XX
DR   WPI; 2002-566690/60.
XX
PT   Inhibiting angiogenesis in a subject, involves administering at least
PT   one antiangiogenic nucleic acid molecule to the subject  -
XX
PS   Claim 2; Page 32; 276pp; English.
XX
CC   The invention relates to inhibiting angiogenesis in a subject, comprising
CC   administering at least one antiangiogenic nucleic acid molecule.
CC   Also included is a kit comprising a first container housing the
CC   antiangiogenic nucleic acids, and instructions for administering them to
CC   a subject having a condition characterised by unwanted angiogenesis.
CC   The method is useful for inhibiting angiogenesis associated with solid
CC   tumour growth, tumour metastasis, precancerous lesion, rheumatoid
CC   arthritis, psoriasis, diabetic retinopathy, retinopathy of prematurity,
CC   macular degeneration, corneal graft rejection, neovascular glaucoma,
CC   retrolental fibroplasia, rubeosis, Osler-Webber Syndrome, myocardial
CC   angiogenesis, plaque neovascularisation, telangiectasia, haemophiliac
CC   joints, angiofibroma, wound granulation, intestinal adhesions,
CC   atherosclerosis, scleroderma and hypertrophic scars. The present
CC   sequence is an antiangiogenic nucleic acid of the invention.
XX
SQ   Sequence 20 BP; 3 A; 7 C; 4 G; 6 T; 0 other;

  Query Match             100.0%;  Score 12;  DB 24;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 9e+02;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db          9 TGCAGCGTTCTC 20


RESULT 8
ABK46453
ID   ABK46453 standard; DNA; 20 BP.
XX
AC   ABK46453;
XX
DT   05-JUN-2002  (first entry)
XX
DE   Immunostimulatory unmethylated CpG oligodideoxynucleotide #43.
XX
KW   unmethylated CpG; oligdideoxynucleotide; ODN; virucide; vaccine;
KW   Paramyxoviridae; F protein; respiratory syncytial virus; RSV;
KW   viral bronchiolitis; pneumonia; infectious pulmonary disease;
KW   bronchopulmonary dysplasia; congenital heart condition; ss.
XX
OS   Synthetic.
XX
PN   WO200211761-A2.
XX
PD   14-FEB-2002.
XX
PF   09-AUG-2001; 2001WO-US41633.
XX
PR   10-AUG-2000; 2000US-224011P.
PR   01-SEP-2000; 2000US-229307P.
XX
PA   (JACK-) JACKSON FOUND ADVANCEMENT MILITARY MED.
XX
PI   Mond JJ,  Prince G,  Klinman DM;
XX
DR   WPI; 2002-227118/28.
XX
PT   Vaccine for immunising patient against respiratory syncytial virus, has
PT   epitopes of Paramyxoviridae F protein, and cytosine followed by guanine
PT   linked by phosphate bond-oligodideoxynucleotides  -
XX
PS   Claim 4; Page 8; 30pp; English.
XX
CC   The invention describes a vaccine comprising one or more epitopes of a
CC   Paramyxoviridae F protein, and one or more CpG (cytosine followed by
CC   guanine linked by phosphate bond)-oligodideoxynucleotides (ODNs). The
CC   vaccine is useful for vaccinating a patient especially against viruses
CC   of the Paramyxoviridae family e.g. respiratory syncytial virus (RSV),
CC   the primary cause of viral bronchiolitis and pneumonia in infants and
CC   children, and infectious pulmonary disease in infants. RSV has been
CC   particularly implicated in death of infants that are premature, have
CC   bronchopulmonary dysplasia, or congenital heart conditions. This
CC   sequence represents an oligodideoxynucleotide that can be used in the
CC   creation of the vaccine.
XX
SQ   Sequence 20 BP; 3 A; 7 C; 4 G; 6 T; 0 other;

  Query Match             100.0%;  Score 12;  DB 24;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 9e+02;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db          9 TGCAGCGTTCTC 20


RESULT 9
ABL38734
ID   ABL38734 standard; DNA; 20 BP.
XX
AC   ABL38734;
XX
DT   16-APR-2002  (first entry)
XX
DE   Immunostimulatory nucleic acid SEQ ID NO: 102.
XX
KW   Antibody-induced cell lysis; cancer; immunostimulatory; CD20;
KW   angiogenesis; metastasis; cytostatic; ss.
XX
OS   Synthetic.
XX
PN   WO200197843-A2.
```

XX
PD 27-DEC-2001.
XX
PF 22-JUN-2001; 2001WO-US20154.
XX
PR 22-JUN-2000; 2000US-213346P.
XX
PA (IOWA) UNIV IOWA RES FOUND.
XX
PI Weiner G, Hartmann G;
XX
DR WPI; 2002-154611/20.
XX
PT Treating or preventing cancer, such as basal cell carcinoma, comprises
PT administering immunostimulatory nucleic acids that induce expression of
PT cell surface antigens and antibodies to a subject having or at risk of
PT developing cancer -
XX
PS Disclosure; Page 120; 312pp; English.
XX
CC The present invention relates to methods for treating or preventing
CC cancer, involving administering to a subject having or at risk of
CC developing cancer immunostimulatory nucleic acids that induce expression
CC of cell surface antigens and antibodies. The methods are useful for
CC treating or preventing cancer such as basal cell carcinoma, bladder
CC cancer, bone cancer, brain and central nervous system (CNS) cancer,
CC breast cancer, cervical cancer, colon and rectum cancer, connective
CC tissue cancer, oesophageal cancer, eye cancer, kidney cancer, larynx
CC cancer, leukaemia, liver cancer, lung cancer, Hodgkin's lymphoma,
CC non-Hodgkin's lymphoma, melanoma, myeloma, oral cavity cancer, ovarian
CC cancer, pancreatic cancer, prostate cancer, rhabdomyosarcoma, skin
CC cancer, stomach cancer, testicular cancer, and uterine cancer. The
CC present sequence is an immunostimulatory oligonucleotide described in
CC the exemplification of the invention.
XX
SQ Sequence 20 BP; 3 A; 7 C; 4 G; 6 T; 0 other;

Query Match 100.0%; Score 12; DB 24; Length 20;
Best Local Similarity 100.0%; Pred. No. 9e+02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TGCAGCGTTCTC 12
||||||||||||
Db 9 TGCAGCGTTCTC 20

RESULT 10
AAA52687
ID AAA52687 standard; DNA; 38 BP.
XX
AC AAA52687;
XX
DT 03-JAN-2001 (first entry)
XX
DE Escherichia coli yggA gene PCR primer #2.
XX
KW E. coli; yggA gene; amino acid production; excretion protein gene;
KW PCR primer; ss.
XX
OS Escherichia coli.
XX
PN EP1016710-A2.
XX
PD 05-JUL-2000.
XX
PF 17-DEC-1999; 99EP-0125263.
XX
PR 30-DEC-1998; 98RU-0124016.
PR 09-MAR-1999; 99RU-0104431.
XX
PA (AJIN) AJINOMOTO CO INC.
XX
PI Livshits VA, Zakataeva NP, Nakanishi K, Aleshin VV, Troshin PV;
PI Tokhmakova IL;
XX
DR WPI; 2000-414802/36.
XX
PT Increased production of L-amino acids by an Escherichia bacterium
PT comprises increasing the expression amount of an L-amino acid excretion
PT protein -
XX
PS Example 1; Page 17; 29pp; English.
XX
CC The present sequence is a PCR primer for the yggA gene (an excretion
CC protein gene) of Escherichia coli. The protein produced from this gene is
CC involved in the production of amino acids, and an increase in its
CC expression leads to an increased accumulation of amino acids in the cell.
CC In this case, an increase in arginine, glutamic acid and lysine is
CC achieved if multiple copies of the gene are transfected into a bacterium.
CC The bacterium used is E. coli.
XX
SQ Sequence 38 BP; 7 A; 12 C; 10 G; 9 T; 0 other;

Query Match 100.0%; Score 12; DB 21; Length 38;
Best Local Similarity 100.0%; Pred. No. 9.2e+02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TGCAGCGTTCTC 12
||||||||||||
Db 8 TGCAGCGTTCTC 19

RESULT 11
AAX21528/c
ID AAX21528 standard; DNA; 88 BP.
XX
AC AAX21528;
XX
DT 13-MAY-1999 (first entry)
XX
DE Vector pZT7#3.3 constructing 5-3' oligomer #3.
XX
KW Monocyte chemoattractant protein-1; MCP-1; analogue; inflammatory;
KW rheumatoid arthritis; glomerular nephritides; lung fibrosis; restenosis;
KW alveolitis; asthma; atherosclerosis; psoriasis; hypersensitivity; skin;
KW inflammatory bowel disease; multiple sclerosis; brain tumour; stroke;
KW reperfusion injury; ischemia; myocardial infarction; medicament;
KW PCR primer; ss.
XX
OS Synthetic.
OS Homo sapiens.
XX
PN WO9905279-A1.
XX
PD 04-FEB-1999.
XX
PF 21-JUL-1998; 98WO-GB02179.
XX
PR 25-JUL-1997; 97GB-0015663.
PR 25-JUL-1997; 97GB-0015659.
PR 25-JUL-1997; 97GB-0015661.
XX
PA (ZENE) ZENECA LTD.
XX
PI Barratt DG, Needham MRC;
XX
DR WPI; 1999-142934/12.
XX
PT New analogues of Monocyte Chemoattractant Protein-1 (MCP-1) - useful
PT to treat inflammatory diseases
XX
PS Examples; Page 22; 49pp; English.
XX
CC The invention relates to novel analogues ([V9A]MCP1(9-76), [V9G]MCP1
CC (9-76) and [V9T]MCP1(9-76)) of monocyte chemoattractant protein-1 (MCP-1)
CC having substitution of an Ala, Gly or Thr for the natural Val at position

```
CC   9 of full-length MCP-1. Host cells containing a vector comprising the
CC   nucleic acids encoding the analogues are used for recombinant expression
CC   of the proteins. MCP-1 is implicated in  inflammatory diseases including
CC   rheumatoid arthritis, glomerular nephritides, lung fibrosis, restenosis,
CC   alveolitis, and asthma, and in atherosclerosis, psoriasis, delayed-type
CC   hypersensitivity reactions of the skin, inflammatory bowel disease,
CC   multiple sclerosis, and brain tumour.  An MCP-1 inhibitor may be useful
CC   to treat stroke, reperfusion injury, ischemia, myocardial infarction,
CC   and transplant rejection. The analogues can be used as medicaments.
XX
SQ   Sequence 88 BP; 29 A; 20 C; 18 G; 21 T; 0 other;

 Query Match             100.0%;  Score 12;  DB 20;  Length 88;
  Best Local Similarity   100.0%;  Pred. No. 9.5e+02;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db         65 TGCAGCGTTCTC 54


RESULT 12
AAX21529
ID   AAX21529 standard; DNA; 88 BP.
XX
AC   AAX21529;
XX
DT   13-MAY-1999  (first entry)
XX
DE   Vector pZT7#3.3 constructing 3-5' oligomer #4.
XX
KW   Monocyte chemoattractant protein-1; MCP-1; analogue; inflammatory;
KW   rheumatoid arthritis; glomerular nephritides; lung fibrosis; restenosis;
KW   alveolitis; asthma; atherosclerosis; psoriasis; hypersensitivity; skin;
KW   inflammatory bowel disease; multiple sclerosis; brain tumour; stroke;
KW   reperfusion injury; ischemia; myocardial infarction; medicament;
KW   PCR primer; ss.
XX
OS   Synthetic.
OS   Homo sapiens.
XX
PN   WO9905279-A1.
XX
PD   04-FEB-1999.
XX
PF   21-JUL-1998;   98WO-GB02179.
XX
PR   25-JUL-1997;   97GB-0015663.
PR   25-JUL-1997;   97GB-0015659.
PR   25-JUL-1997;   97GB-0015661.
XX
PA   (ZENE ) ZENECA LTD.
XX
PI   Barratt DG,  Needham MRC;
XX
DR   WPI; 1999-142934/12.
XX
PT   New analogues of Monocyte Chemoattractant Protein-1 (MCP-1) - useful
PT   to treat inflammatory diseases
XX
PS   Examples; Page 22; 49pp; English.
XX
CC   The invention relates to novel analogues ([V9A]MCP1(9-76), [V9G]MCP1
CC   (9-76) and [V9T]MCP1(9-76)) of monocyte chemoattractant protein-1 (MCP-1)
CC   having substitution of an Ala, Gly or Thr for the natural Val at position
CC   9 of full-length MCP-1. Host cells containing a vector comprising the
CC   nucleic acids encoding the analogues are used for recombinant expression
CC   of the proteins. MCP-1 is implicated in  inflammatory diseases including
CC   rheumatoid arthritis, glomerular nephritides, lung fibrosis, restenosis,
CC   alveolitis, and asthma, and in atherosclerosis, psoriasis, delayed-type
CC   hypersensitivity reactions of the skin, inflammatory bowel disease,
CC   multiple sclerosis, and brain tumour.  An MCP-1 inhibitor may be useful
CC   to treat stroke, reperfusion injury, ischemia, myocardial infarction,
CC   and transplant rejection. The analogues can be used as medicaments.
XX
SQ   Sequence 88 BP; 20 A; 19 C; 21 G; 28 T; 0 other;

  Query Match             100.0%;  Score 12;  DB 20;  Length 88;
  Best Local Similarity   100.0%;  Pred. No. 9.5e+02;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db         28 TGCAGCGTTCTC 39


RESULT 13
AAL02385
ID   AAL02385 standard; cDNA; 177 BP.
XX
AC   AAL02385;
XX
DT   21-NOV-2001  (first entry)
XX
DE   Human reproductive system related antigen cDNA SEQ ID NO: 2386.
XX
KW   Human; reproductive system related antigen; reproductive system disorder;
KW   cancer; gene therapy; ss.
XX
OS   Homo sapiens.
XX
PN   WO200155320-A2.
XX
PD   02-AUG-2001.
XX
PF   17-JAN-2001; 2001WO-US01339.
XX
PR   31-JAN-2000; 2000US-0179065.
PR   04-FEB-2000; 2000US-0180628.
PR   24-FEB-2000; 2000US-0184664.
PR   02-MAR-2000; 2000US-0186350.
PR   16-MAR-2000; 2000US-0189874.
PR   17-MAR-2000; 2000US-0190076.
PR   18-APR-2000; 2000US-0198123.
PR   19-MAY-2000; 2000US-0205515.
PR   07-JUN-2000; 2000US-0209467.
PR   28-JUN-2000; 2000US-0214886.
PR   30-JUN-2000; 2000US-0215135.
PR   07-JUL-2000; 2000US-0216647.
PR   07-JUL-2000; 2000US-0216880.
PR   11-JUL-2000; 2000US-0217487.
PR   11-JUL-2000; 2000US-0217496.
PR   14-JUL-2000; 2000US-0218290.
PR   26-JUL-2000; 2000US-0220963.
PR   26-JUL-2000; 2000US-0220964.
PR   14-AUG-2000; 2000US-0224518.
PR   14-AUG-2000; 2000US-0224519.
PR   14-AUG-2000; 2000US-0225213.
PR   14-AUG-2000; 2000US-0225214.
PR   14-AUG-2000; 2000US-0225266.
PR   14-AUG-2000; 2000US-0225267.
PR   14-AUG-2000; 2000US-0225268.
PR   14-AUG-2000; 2000US-0225270.
PR   14-AUG-2000; 2000US-0225447.
PR   14-AUG-2000; 2000US-0225757.
PR   14-AUG-2000; 2000US-0225758.
PR   14-AUG-2000; 2000US-0225759.
PR   18-AUG-2000; 2000US-0226279.
PR   22-AUG-2000; 2000US-0226681.
PR   22-AUG-2000; 2000US-0226868.
PR   22-AUG-2000; 2000US-0227182.
PR   23-AUG-2000; 2000US-0227009.
PR   30-AUG-2000; 2000US-0228924.
PR   01-SEP-2000; 2000US-0229287.
PR   01-SEP-2000; 2000US-0229343.
PR   01-SEP-2000; 2000US-0229344.
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PR 01-SEP-2000; 2000US-0229345.
PR 05-SEP-2000; 2000US-0229509.
PR 05-SEP-2000; 2000US-0229513.
PR 06-SEP-2000; 2000US-0230437.
PR 06-SEP-2000; 2000US-0230438.
PR 08-SEP-2000; 2000US-0231242.
PR 08-SEP-2000; 2000US-0231243.
PR 08-SEP-2000; 2000US-0231244.
PR 08-SEP-2000; 2000US-0231413.
PR 08-SEP-2000; 2000US-0231414.
PR 08-SEP-2000; 2000US-0232080.
PR 08-SEP-2000; 2000US-0232081.
PR 12-SEP-2000; 2000US-0231968.
PR 14-SEP-2000; 2000US-0232397.
PR 14-SEP-2000; 2000US-0232398.
PR 14-SEP-2000; 2000US-0232399.
PR 14-SEP-2000; 2000US-0232400.
PR 14-SEP-2000; 2000US-0232401.
PR 14-SEP-2000; 2000US-0233063.
PR 14-SEP-2000; 2000US-0233064.
PR 14-SEP-2000; 2000US-0233065.
PR 21-SEP-2000; 2000US-0234223.
PR 21-SEP-2000; 2000US-0234274.
PR 25-SEP-2000; 2000US-0234997.
PR 25-SEP-2000; 2000US-0234998.
PR 26-SEP-2000; 2000US-0235484.
PR 27-SEP-2000; 2000US-0235834.
PR 27-SEP-2000; 2000US-0235836.
PR 29-SEP-2000; 2000US-0236327.
PR 29-SEP-2000; 2000US-0236367.
PR 29-SEP-2000; 2000US-0236368.
PR 29-SEP-2000; 2000US-0236369.
PR 29-SEP-2000; 2000US-0236370.
PR 02-OCT-2000; 2000US-0236802.
PR 02-OCT-2000; 2000US-0237037.
PR 02-OCT-2000; 2000US-0237038.
PR 02-OCT-2000; 2000US-0237039.
PR 02-OCT-2000; 2000US-0237040.
PR 13-OCT-2000; 2000US-0239935.
PR 13-OCT-2000; 2000US-0239937.
PR 20-OCT-2000; 2000US-0240960.
PR 20-OCT-2000; 2000US-0241221.
PR 20-OCT-2000; 2000US-0241785.
PR 20-OCT-2000; 2000US-0241786.
PR 20-OCT-2000; 2000US-0241787.
PR 20-OCT-2000; 2000US-0241808.
PR 20-OCT-2000; 2000US-0241809.
PR 20-OCT-2000; 2000US-0241826.
PR 01-NOV-2000; 2000US-0244617.
PR 08-NOV-2000; 2000US-0246474.
PR 08-NOV-2000; 2000US-0246475.
PR 08-NOV-2000; 2000US-0246476.
PR 08-NOV-2000; 2000US-0246477.
PR 08-NOV-2000; 2000US-0246478.
PR 08-NOV-2000; 2000US-0246523.
PR 08-NOV-2000; 2000US-0246524.
PR 08-NOV-2000; 2000US-0246525.
PR 08-NOV-2000; 2000US-0246526.
PR 08-NOV-2000; 2000US-0246527.
PR 08-NOV-2000; 2000US-0246528.
PR 08-NOV-2000; 2000US-0246532.
PR 08-NOV-2000; 2000US-0246609.
PR 08-NOV-2000; 2000US-0246610.
PR 08-NOV-2000; 2000US-0246611.
PR 08-NOV-2000; 2000US-0246613.
PR 17-NOV-2000; 2000US-0249207.
PR 17-NOV-2000; 2000US-0249208.
PR 17-NOV-2000; 2000US-0249209.
PR 17-NOV-2000; 2000US-0249210.
PR 17-NOV-2000; 2000US-0249211.
PR 17-NOV-2000; 2000US-0249212.
PR 17-NOV-2000; 2000US-0249213.
PR 17-NOV-2000; 2000US-0249214.
PR 17-NOV-2000; 2000US-0249215.
PR 17-NOV-2000; 2000US-0249216.
PR 17-NOV-2000; 2000US-0249217.
PR 17-NOV-2000; 2000US-0249218.
PR 17-NOV-2000; 2000US-0249244.
PR 17-NOV-2000; 2000US-0249245.
PR 17-NOV-2000; 2000US-0249264.
PR 17-NOV-2000; 2000US-0249265.
PR 17-NOV-2000; 2000US-0249297.
PR 17-NOV-2000; 2000US-0249299.
PR 17-NOV-2000; 2000US-0249300.
PR 01-DEC-2000; 2000US-0250160.
PR 01-DEC-2000; 2000US-0250391.
PR 05-DEC-2000; 2000US-0251030.
PR 05-DEC-2000; 2000US-0251988.
PR 05-DEC-2000; 2000US-0256719.
PR 06-DEC-2000; 2000US-0251479.
PR 08-DEC-2000; 2000US-0251856.
PR 08-DEC-2000; 2000US-0251868.
PR 08-DEC-2000; 2000US-0251869.
PR 08-DEC-2000; 2000US-0251989.
PR 08-DEC-2000; 2000US-0251990.
PR 11-DEC-2000; 2000US-0254097.
PR 05-JAN-2001; 2001US-0259678.
XX
PA (HUMA-) HUMAN GENOME SCI INC.
XX
PI Rosen CA, Barash SC, Ruben SM;
XX
DR WPI; 2001-465570/50.
DR P-PSDB; AAM96415.
XX
PT Isolated nucleic acid molecule encoding a reproductive system antigen
PT is used in preventing, treating or ameliorating a medical condition -
XX
PS Claim 1; SEQ ID NO 2386; 1297pp + Sequence Listing; English.
XX
CC The present invention provides the protein and coding sequences of a
CC number of human reproductive system related antigens. These can be used
CC in the prevention and treatment of reproductive system disorders,
CC including cancer. The present sequence is a coding sequence of the
CC invention.
XX
SQ Sequence 177 BP; 26 A; 54 C; 33 G; 61 T; 3 other;

Query Match 100.0%; Score 12; DB 22; Length 177;
Best Local Similarity 100.0%; Pred. No. 9.8e+02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TGCAGCGTTCTC 12
||||||||||||
Db 73 TGCAGCGTTCTC 84

RESULT 14
ABN76325/c
ID ABN76325 standard; cDNA; 252 BP.
XX
AC ABN76325;
XX
DT 08-JUL-2002 (first entry)
XX
DE Human transcription factor-like ORF1272 cDNA, SEQ ID NO:2543.
XX
KW Human; ORF; open reading frame; ORFX; drug screening; diagnosis;
KW disease monitoring; cytokine; cell proliferation; cell differentiation;
KW immune modulation; haematopoiesis regulation; tissue growth;
KW angiogenesis; activin; inhibin; chemotactic; chemokinetic; haemostatic;
KW thrombolytic; tumour inhibition; bodily characteristic; fertility;
KW behaviour; cancer; proliferative disorder; neurological disorder;
KW cardiovascular disease; immune system disorder; organ transplantation;
KW tissue growth disorder; tissue regeneration disorder; diabetes mellitus;
KW hypothyroidism; cholesterol ester storage disease; infection; vulnerary;

```
KW   vasotropic; antipsoriatic; antidiabetic; cytostatic; nootropic;
KW   neuroprotective; antiatherosclerotic; anticoagulant; thrombolytic;
KW   cardiant; hypotensive; antithyroid; antiinflammatory; immunomodulator;
KW   dermatological; analgesic; virucide; antibacterial; fungicide; gene; ss.
XX
OS   Homo sapiens.
XX
PN   WO200190366-A2.
XX
PD   29-NOV-2001.
XX
PF   24-MAY-2001; 2001WO-US17076.
XX
PR   24-MAY-2000; 2000US-206690P.
XX
PA   (CURA-) CURAGEN CORP.
XX
PI   Leach MD,  Shimkets RA;
XX
DR   WPI; 2002-106200/14.
DR   P-PSDB; ABP32299.
XX
PT   Novel human polypeptides and polynucleotides useful for diagnosing,
PT   preventing and treating cardiovascular disease, neurodegenerative,
PT   hyperproliferative disorders and disorders related to organ
PT   transplantation -
XX
PS   Claim 1; Page 896; 2508pp; English.
XX
CC   Sequences ABP31028-ABP35561 represent 4534 novel human proteins
CC   designated ORF (open reading frame) 1-4534, and sequences ABN75054-
CC   ABN79587 represent cDNAs encoding them. The invention also encompasses
CC   polypeptides at least 80% identical to the ORF1-ORF4534 (collectively
CC   referred to as ORFX) proteins, polynucleotides at least 85% identical to
CC   the ORFX nucleic acid sequences, vectors and host cells comprising ORFX
CC   polynucleotides, the recombinant production of ORFX proteins, antibodies
CC   specific for ORFX proteins, methods of detecting ORFX polynucleotides and
CC   polypeptides, methods of screening for modulators of ORFX expression or
CC   activity, and methods of screening individuals for a predisposition to an
CC   ORFX-associated disorder. The ORFX proteins of the invention have a wide
CC   range of biological activities, such as cytokine, cell proliferation,
CC   cell differentiation, immune modulation, haematopoiesis regulation,
CC   tissue growth, angiogenesis, activin or inhibin activity, chemotactic/
CC   chemokinetic activity, haemostatic activity, thrombolytic activity,
CC   receptor/ligand, antiinflammatory activity, tumour inhibition activity,
CC   and antiinfective activity, and may also be involved in the determination
CC   of bodily characteristics, fertility and behaviour. ORFX proteins,
CC   nucleic acids and antibodies may be used in the treatment of cancers,
CC   other proliferative disorders such as psoriasis and benign tumours,
CC   neurological disorders such as epilepsy and Alzheimer's disease,
CC   cardiovascular diseases, immune system disorders, disorders related to
CC   organ transplantation, disorders of tissue growth and regeneration,
CC   diseases such as diabetes mellitus, hypothyroidism, and cholesterol ester
CC   storage disease, and infectious diseases caused by viral, bacterial,
CC   fungal and other pathogens. ORFX nucleic acids may also be used as a
CC   source of primers and probes, in the detection of ORFX genomic sequences
CC   or transcripts, in the identification and cloning of homologous
CC   sequences, in genetic diagnosis, and in forensic biology. The ORFX
CC   nucleic acids may additionally be used to produce transgenic animals
CC   which may be useful for studying the function and/or activity of ORFX
CC   protein, and in drug screening. The ORFX proteins may also be used as
CC   immunogens to generate specific antibodies, which are useful in the
CC   diagnosis, treatment and monitoring of ORFX-associated diseases.
XX
SQ   Sequence 252 BP; 74 A; 50 C; 63 G; 65 T; 0 other;

  Query Match             100.0%;  Score 12;  DB 24;  Length 252;
  Best Local Similarity   100.0%;  Pred. No. 9.9e+02;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
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Db        195 TGCAGCGTTCTC 184
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RESULT 15
AAX37307/c
ID   AAX37307 standard; DNA; 254 BP.
XX
AC   AAX37307;
XX
DT   05-JUL-1999  (first entry)
XX
DE   Human breast-specific BS200 DNA EST clone 3213801.
XX
KW   Breast; cancer; BS200; EST; expressed sequence tag; human; detection;
KW   diagnosis; prevention; treatment; disease predisposition; ss.
XX
OS   Homo sapiens.
XX
PN   WO9902714-A1.
XX
PD   21-JAN-1999.
XX
PF   07-JUL-1998;   98WO-US13908.
XX
PR   07-JUL-1997;   97US-0889127.
XX
PA   (ABBO ) ABBOTT LAB.
XX
PI   Billing-Medel PA,  Cohen M,  Colpitts TL,  Friedman PN;
PI   Gordon J,  Granados EN,  Hodges SC,  Klass MR,  Kratochvil JD;
PI   Russell JC,  Stroupe SD,  Yu H;
XX
DR   WPI; 1999-120915/10.
XX
PT   New breast specific gene BS200 - used to develop products for
PT   detecting, diagnosing, staging, preventing or treating diseases or
PT   conditions of the breast, e.g. breast cancer
XX
PS   Claim 1b; Page 108; 124pp; English.
XX
CC   This invention describes a novel human breast-specific protein BS200.
CC   This protein and its encoding nucleic acids are useful for detecting,
CC   diagnosing, staging, monitoring, prognosticating, preventing or
CC   treating, or determining predisposition to diseases or conditions of the
CC   breast, such as breast cancer. AAX37305-X37320 are expressed sequence
CC   tags (EST's) used in the method of the invention.
XX
SQ   Sequence 254 BP; 71 A; 67 C; 70 G; 46 T; 0 other;

  Query Match             100.0%;  Score 12;  DB 20;  Length 254;
  Best Local Similarity   100.0%;  Pred. No. 9.9e+02;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db        216 TGCAGCGTTCTC 205


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Job time : 76.8235 secs
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GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: January 20, 2004, 16:34:44 ; Search time 19.7647 Seconds
(without alignments)
267.983 Million cell updates/sec

Title: US-10-068-160-74
Perfect score: 12
Sequence: 1 tgcagcgttctc 12

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 569978 seqs, 220691566 residues

Total number of hits satisfying chosen parameters: 1139956

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued_Patents_NA:*
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2: /cgn2_6/ptodata/2/ina/5B_COMB.seq:*
3: /cgn2_6/ptodata/2/ina/6A_COMB.seq:*
4: /cgn2_6/ptodata/2/ina/6B_COMB.seq:*
5: /cgn2_6/ptodata/2/ina/PCTUS_COMB.seq:*
6: /cgn2_6/ptodata/2/ina/backfiles1.seq:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	Result No.	Score	% Query Match	Length	DB	ID	Description
c	1	12	100.0	88	4	US-09-463-458A-12	Sequence 12, Appl
	2	12	100.0	88	4	US-09-463-458A-13	Sequence 13, Appl
c	3	12	100.0	88	4	US-09-463-451-3	Sequence 3, Appli
	4	12	100.0	88	4	US-09-463-451-4	Sequence 4, Appli
c	5	12	100.0	417	4	US-09-134-001C-854	Sequence 854, App
c	6	12	100.0	421	4	US-09-404-879A-157	Sequence 157, App
c	7	12	100.0	421	4	US-09-338-933-157	Sequence 157, App
c	8	12	100.0	421	4	US-09-215-681-157	Sequence 157, App
	9	12	100.0	658	3	US-09-328-111-196	Sequence 196, App
c	10	12	100.0	732	4	US-09-252-991A-12313	Sequence 12313, A
c	11	12	100.0	790	1	US-08-393-985-22	Sequence 22, Appl
c	12	12	100.0	2097	1	US-08-393-985-1	Sequence 1, Appli
c	13	12	100.0	2262	4	US-09-252-991A-12363	Sequence 12363, A
	14	12	100.0	4299	1	US-08-264-002-1	Sequence 1, Appli
	15	12	100.0	4413	4	US-09-221-017B-811	Sequence 811, App
c	16	12	100.0	6317	1	US-08-920-812-21	Sequence 21, Appl
c	17	12	100.0	6317	1	US-08-920-827-21	Sequence 21, Appl
c	18	12	100.0	6317	1	US-08-921-177-21	Sequence 21, Appl
c	19	12	100.0	6317	1	US-08-362-577C-21	Sequence 21, Appl
c	20	12	100.0	6317	2	US-08-920-828-21	Sequence 21, Appl
	21	12	100.0	9827	4	US-09-453-702B-66	Sequence 66, Appl
	22	12	100.0	99500	4	US-09-798-096-10	Sequence 10, Appl
c	23	11	91.7	291	4	US-09-184-418C-31	Sequence 31, Appl
	24	11	91.7	417	4	US-09-134-001C-1044	Sequence 1044, Ap
	25	11	91.7	426	4	US-09-174-943-5	Sequence 5, Appli
	26	11	91.7	435	4	US-09-252-991A-584	Sequence 584, App
	27	11	91.7	444	4	US-09-252-991A-2053	Sequence 2053, Ap
c	28	11	91.7	489	4	US-09-252-991A-14631	Sequence 14631, A
c	29	11	91.7	501	4	US-09-252-991A-12022	Sequence 12022, A
	30	11	91.7	584	3	US-09-328-111-83	Sequence 83, Appl
c	31	11	91.7	600	4	US-09-564-595D-36	Sequence 36, Appl
c	32	11	91.7	687	4	US-09-252-991A-12976	Sequence 12976, A
	33	11	91.7	783	4	US-09-149-476-270	Sequence 270, App
	34	11	91.7	842	4	US-09-149-476-115	Sequence 115, App
	35	11	91.7	876	4	US-09-252-991A-12753	Sequence 12753, A
	36	11	91.7	950	4	US-09-636-499-20	Sequence 20, Appl
c	37	11	91.7	1041	4	US-09-252-991A-14752	Sequence 14752, A
	38	11	91.7	1061	1	US-08-426-169-4	Sequence 4, Appli
	39	11	91.7	1061	3	US-09-233-813-4	Sequence 4, Appli
	40	11	91.7	1061	5	PCT-US95-09470-4	Sequence 4, Appli
c	41	11	91.7	1146	4	US-09-252-991A-535	Sequence 535, App
c	42	11	91.7	1164	4	US-09-252-991A-1906	Sequence 1906, Ap
	43	11	91.7	1293	1	US-08-476-008-43	Sequence 43, Appl
	44	11	91.7	1293	1	US-08-306-063-43	Sequence 43, Appl
	45	11	91.7	1293	1	US-08-833-485-43	Sequence 43, Appl

ALIGNMENTS

RESULT 1
US-09-463-458A-12/c
; Sequence 12, Application US/09463458A
; Patent No. 6383782
; GENERAL INFORMATION:
; APPLICANT: Barratt, Derek G
; APPLICANT: Needham, Maurice R.C.
; TITLE OF INVENTION: MCP-1 ANALOGS
; FILE REFERENCE: 1991-186
; CURRENT APPLICATION NUMBER: US/09/463,458A
; CURRENT FILING DATE: 2000-01-27
; PRIOR APPLICATION NUMBER: PCT/GB98/02179
; PRIOR FILING DATE: 1998-07-21
; NUMBER OF SEQ ID NOS: 32
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 12
; LENGTH: 88
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: 5'-3' oligomer
; OTHER INFORMATION: #3
US-09-463-458A-12

Query Match 100.0%; Score 12; DB 4; Length 88;
Best Local Similarity 100.0%; Pred. No. 1.1e+02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 TGCAGCGTTCTC 12
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Db         65 TGCAGCGTTCTC 54
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RESULT 2
US-09-463-458A-13
; Sequence 13, Application US/09463458A
; Patent No. 6383782
; GENERAL INFORMATION:
; APPLICANT: Barratt, Derek G
; APPLICANT: Needham, Maurice R.C.
; TITLE OF INVENTION: MCP-1 ANALOGS
; FILE REFERENCE: 1991-186
; CURRENT APPLICATION NUMBER: US/09/463,458A
; CURRENT FILING DATE: 2000-01-27
; PRIOR APPLICATION NUMBER: PCT/GB98/02179
; PRIOR FILING DATE: 1998-07-21
; NUMBER OF SEQ ID NOS: 32
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 13
; LENGTH: 88

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;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: 3'-5' oligomer
;   OTHER INFORMATION: #4
US-09-463-458A-13

  Query Match             100.0%;  Score 12;  DB 4;  Length 88;
  Best Local Similarity   100.0%;  Pred. No. 1.1e+02;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db         28 TGCAGCGTTCTC 39


RESULT 3
US-09-463-451-3/c
; Sequence 3, Application US/09463451
; Patent No. 6537779
;   GENERAL INFORMATION:
;        APPLICANT: KARA, Buhpendra V.
;                   PIOLI, David
;                   BUNDELL, Kenneth R.
;                   HOCKNEY, Robert C.
;        TITLE OF INVENTION: T7 Promoter-Based Expression System
;        NUMBER OF SEQUENCES: 32
;        CORRESPONDENCE ADDRESS:
;             ADDRESSEE: Pillsbury Madison & Sutro, L.L.P.
;             STREET: 1100 New York Avenue, N.W.
;             CITY: Washington
;             STATE: D.C.
;             COUNTRY: USA
;             ZIP: 20005-3918
;        COMPUTER READABLE FORM:
;             MEDIUM TYPE: Floppy disk
;             COMPUTER: IBM PC compatible
;             OPERATING SYSTEM: PC-DOS/MS-DOS
;             SOFTWARE: MS Word
;        CURRENT APPLICATION DATA:
;             APPLICATION NUMBER: US/09/463,451
;             FILING DATE: 03-Apr-2000
;             CLASSIFICATION: <Unknown>
;        PRIOR APPLICATION DATA:
;             APPLICATION NUMBER: PCT/GB98/02175
;             FILING DATE: 21-JUL-1998
;             APPLICATION NUMBER: GB 9715660.8
;             FILING DATE: 25-JUL-1997
;   INFORMATION FOR SEQ ID NO: 3:
;        SEQUENCE CHARACTERISTICS:
;             LENGTH: 88 base pairs
;             TYPE: nucleic acid
;             STRANDEDNESS: single
;             TOPOLOGY: linear
;        MOLECULE TYPE: other nucleic acid
;        SEQUENCE DESCRIPTION: SEQ ID NO: 3:
US-09-463-451-3

  Query Match             100.0%;  Score 12;  DB 4;  Length 88;
  Best Local Similarity   100.0%;  Pred. No. 1.1e+02;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db         65 TGCAGCGTTCTC 54


RESULT 4
US-09-463-451-4
; Sequence 4, Application US/09463451
; Patent No. 6537779
;   GENERAL INFORMATION:
;        APPLICANT: KARA, Buhpendra V.
;                   PIOLI, David
;                   BUNDELL, Kenneth R.
;                   HOCKNEY, Robert C.
;        TITLE OF INVENTION: T7 Promoter-Based Expression System
;        NUMBER OF SEQUENCES: 32
;        CORRESPONDENCE ADDRESS:
;             ADDRESSEE: Pillsbury Madison & Sutro, L.L.P.
;             STREET: 1100 New York Avenue, N.W.
;             CITY: Washington
;             STATE: D.C.
;             COUNTRY: USA
;             ZIP: 20005-3918
;        COMPUTER READABLE FORM:
;             MEDIUM TYPE: Floppy disk
;             COMPUTER: IBM PC compatible
;             OPERATING SYSTEM: PC-DOS/MS-DOS
;             SOFTWARE: MS Word
;        CURRENT APPLICATION DATA:
;             APPLICATION NUMBER: US/09/463,451
;             FILING DATE: 03-Apr-2000
;             CLASSIFICATION: <Unknown>
;        PRIOR APPLICATION DATA:
;             APPLICATION NUMBER: PCT/GB98/02175
;             FILING DATE: 21-JUL-1998
;             APPLICATION NUMBER: GB 9715660.8
;             FILING DATE: 25-JUL-1997
;   INFORMATION FOR SEQ ID NO: 4:
;        SEQUENCE CHARACTERISTICS:
;             LENGTH: 88 base pairs
;             TYPE: nucleic acid
;             STRANDEDNESS: single
;             TOPOLOGY: linear
;        MOLECULE TYPE: other nucleic acid
;        SEQUENCE DESCRIPTION: SEQ ID NO: 4:
US-09-463-451-4

  Query Match             100.0%;  Score 12;  DB 4;  Length 88;
  Best Local Similarity   100.0%;  Pred. No. 1.1e+02;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db         28 TGCAGCGTTCTC 39


RESULT 5
US-09-134-001C-854/c
; Sequence 854, Application US/09134001C
; Patent No. 6380370
; GENERAL INFORMATION:
;  APPLICANT: Lynn Doucette-Stamm et al
;  TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO STAPHYLOCOCCUS
;  TITLE OF INVENTION:  EPIDERMIDIS FOR DIAGNOSTICS AND THERAPEUTICS
;  FILE REFERENCE: GTC-007
;  CURRENT APPLICATION NUMBER: US/09/134,001C
;  CURRENT FILING DATE:  1998-08-13
;  PRIOR APPLICATION NUMBER: US 60/064,964
;  PRIOR FILING DATE: 1997-11-08
;  PRIOR APPLICATION NUMBER: US 60/055,779
;  PRIOR FILING DATE: 1997-08-14
;  NUMBER OF SEQ ID NOS: 5674
; SEQ ID NO 854
;   LENGTH: 417
;   TYPE: DNA
;   ORGANISM: Staphylococcus epidermidis
US-09-134-001C-854

  Query Match             100.0%;  Score 12;  DB 4;  Length 417;
  Best Local Similarity   100.0%;  Pred. No. 1.2e+02;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
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Db        156 TGCAGCGTTCTC 145


RESULT 6
US-09-404-879A-157/c
; Sequence 157, Application US/09404879A
; Patent No. 6468546
; GENERAL INFORMATION:
;  APPLICANT:  Mitcham, Jennifer L.
;  APPLICANT:  King, Gordon E.
;  APPLICANT:  Algate, Paul A.
;  TITLE OF INVENTION:  COMPOSITIONS AND METHODS FOR THE THERAPY AND
;  TITLE OF INVENTION:  DIAGNOSIS OF OVARIAN CANCER
;  FILE REFERENCE:  210121.462C2
;  CURRENT APPLICATION NUMBER: US/09/404,879A
;  CURRENT FILING DATE:  1999-09-24
;  NUMBER OF SEQ ID NOS:  393
;  SOFTWARE:  FastSEQ for Windows Version 3.0
; SEQ ID NO 157
;   LENGTH: 421
;   TYPE: DNA
;   ORGANISM: Homo sapien
US-09-404-879A-157

  Query Match            100.0%;  Score 12;  DB 4;  Length 421;
  Best Local Similarity  100.0%;  Pred. No. 1.2e+02;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db        318 TGCAGCGTTCTC 307


RESULT 7
US-09-338-933-157/c
; Sequence 157, Application US/09338933
; Patent No. 6488931
; GENERAL INFORMATION:
;  APPLICANT: Mitcham, Jennifer Lynn
;  APPLICANT: King, Gordon E.
;  TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THERAPY OF
;  TITLE OF INVENTION: OVARIAN CANCER
;  FILE REFERENCE: 210121.462C1
;  CURRENT APPLICATION NUMBER: US/09/338,933
;  CURRENT FILING DATE: 1999-06-23
;  NUMBER OF SEQ ID NOS: 312
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 157
;   LENGTH: 421
;   TYPE: DNA
;   ORGANISM: Homo sapien
US-09-338-933-157

  Query Match            100.0%;  Score 12;  DB 4;  Length 421;
  Best Local Similarity  100.0%;  Pred. No. 1.2e+02;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db        318 TGCAGCGTTCTC 307


RESULT 8
US-09-215-681-157/c
; Sequence 157, Application US/09215681A
; Patent No. 6528253
; GENERAL INFORMATION:
;  APPLICANT: Mitcham, Jennifer L.
;  APPLICANT: Frudakis, Tony N.
;  APPLICANT: King, Gordon E.
;  TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR DIAGNOSIS
;  TITLE OF INVENTION: OF OVARIAN CANCER
;  FILE REFERENCE: 210121.463
;  CURRENT APPLICATION NUMBER: US/09/215,681A
;  CURRENT FILING DATE: 1998-12-17
;  NUMBER OF SEQ ID NOS: 310
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 157
;   LENGTH: 421
;   TYPE: DNA
;   ORGANISM: Homo sapien
US-09-215-681-157

  Query Match            100.0%;  Score 12;  DB 4;  Length 421;
  Best Local Similarity  100.0%;  Pred. No. 1.2e+02;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db        318 TGCAGCGTTCTC 307


RESULT 9
US-09-328-111-196
; Sequence 196, Application US/09328111
; Patent No. 6262333
; GENERAL INFORMATION:
;  APPLICANT: Endege, Wilson O.
;  APPLICANT: Steinmann, Kathleen E.
;  APPLICANT: Astle, Jon H.
;  APPLICANT: Burgess, Christopher C.
;  APPLICANT: Bushnell, Steven E.
;  APPLICANT: Carroll III, Eddie
;  APPLICANT: Catino, Theodore J.
;  APPLICANT: Derti, Adnan
;  APPLICANT: Ford, Donna M.
;  APPLICANT: Lewis, Marcia E.
;  APPLICANT: Monahan, John E.
;  APPLICANT: Schlegel, Robert
;  TITLE OF INVENTION: NOVEL HUMAN GENES AND GENE EXPRESSION
;  TITLE OF INVENTION: PRODUCTS
;  FILE REFERENCE: CCD-257 (US)
;  CURRENT APPLICATION NUMBER: US/09/328,111
;  CURRENT FILING DATE: 1999-06-08
;  EARLIER APPLICATION NUMBER: US 60/088,801
;  EARLIER FILING DATE: 1998-06-10
;  NUMBER OF SEQ ID NOS: 850
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 196
;   LENGTH: 658
;   TYPE: DNA
;   ORGANISM: Homo sapiens
;   FEATURE:
;   NAME/KEY: misc_feature
;   LOCATION: (1)...(658)
;   OTHER INFORMATION: n = A,T,C or G
US-09-328-111-196

  Query Match            100.0%;  Score 12;  DB 3;  Length 658;
  Best Local Similarity  100.0%;  Pred. No. 1.3e+02;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db         65 TGCAGCGTTCTC 76


RESULT 10
US-09-252-991A-12313/c
; Sequence 12313, Application US/09252991A
; Patent No. 6551795
; GENERAL INFORMATION:
;  APPLICANT:  Marc J. Rubenfield et al.
;  TITLE OF INVENTION:  NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
;  TITLE OF INVENTION:  AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
;  FILE REFERENCE:  107196.136
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;  CURRENT APPLICATION NUMBER: US/09/252,991A
;  CURRENT FILING DATE:  1999-02-18
;  PRIOR APPLICATION NUMBER:  US 60/074,788
;  PRIOR FILING DATE:  1998-02-18
;  PRIOR APPLICATION NUMBER:  US 60/094,190
;  PRIOR FILING DATE:  1998-07-27
;  NUMBER OF SEQ ID NOS:  33142
; SEQ ID NO 12313
;   LENGTH: 732
;   TYPE: DNA
;   ORGANISM: Pseudomonas aeruginosa
US-09-252-991A-12313

  Query Match             100.0%;  Score 12;  DB 4;  Length 732;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db        618 TGCAGCGTTCTC 607


RESULT 11
US-08-393-985-22/c
; Sequence 22, Application US/08393985
; Patent No. 5693476
;  GENERAL INFORMATION:
;    APPLICANT:  Scheller, Richard H.
;    TITLE OF INVENTION:  Methods and Compositions for Modulation
;    TITLE OF INVENTION:  of Vesicular Release
;    NUMBER OF SEQUENCES:  35
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Dehlinger & Associates
;      STREET:  350 Cambridge Avenue, Suite 250
;      CITY:  Palo Alto
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  94306
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/393,985
;      FILING DATE:
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Sholtz, Charles K.
;      REGISTRATION NUMBER:  38,615
;      REFERENCE/DOCKET NUMBER:  8600-0152
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 324-0880
;      TELEFAX:  (415) 324-0960
;  INFORMATION FOR SEQ ID NO:  22:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  790 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  double
;      TOPOLOGY:  unknown
;    MOLECULE TYPE:  cDNA to mRNA
;    HYPOTHETICAL:  NO
;    ANTI-SENSE:  NO
;    ORIGINAL SOURCE:
;      INDIVIDUAL ISOLATE:  Cytoplasmic domain of Rat syntaxin 1A
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  2..790
US-08-393-985-22

  Query Match             100.0%;  Score 12;  DB 1;  Length 790;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db        428 TGCAGCGTTCTC 417


RESULT 12
US-08-393-985-1/c
; Sequence 1, Application US/08393985
; Patent No. 5693476
;  GENERAL INFORMATION:
;    APPLICANT:  Scheller, Richard H.
;    TITLE OF INVENTION:  Methods and Compositions for Modulation
;    TITLE OF INVENTION:  of Vesicular Release
;    NUMBER OF SEQUENCES:  35
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Dehlinger & Associates
;      STREET:  350 Cambridge Avenue, Suite 250
;      CITY:  Palo Alto
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  94306
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/393,985
;      FILING DATE:
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Sholtz, Charles K.
;      REGISTRATION NUMBER:  38,615
;      REFERENCE/DOCKET NUMBER:  8600-0152
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 324-0880
;      TELEFAX:  (415) 324-0960
;  INFORMATION FOR SEQ ID NO:  1:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  2097 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  double
;      TOPOLOGY:  unknown
;    MOLECULE TYPE:  cDNA to mRNA
;    HYPOTHETICAL:  NO
;    ANTI-SENSE:  NO
;    ORIGINAL SOURCE:
;      INDIVIDUAL ISOLATE:  Rat syntaxin 1A 3' end (encoding amino
;      INDIVIDUAL ISOLATE:  acids 4-288; GenBank M95734)
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  2..859
US-08-393-985-1

  Query Match             100.0%;  Score 12;  DB 1;  Length 2097;
  Best Local Similarity   100.0%;  Pred. No. 1.4e+02;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db        428 TGCAGCGTTCTC 417


RESULT 13
US-09-252-991A-12363/c
; Sequence 12363, Application US/09252991A
; Patent No. 6551795
; GENERAL INFORMATION:
;  APPLICANT:  Marc J. Rubenfield et al.
;  TITLE OF INVENTION:  NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
;  TITLE OF INVENTION:  AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
;  FILE REFERENCE:  107196.136
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;  CURRENT APPLICATION NUMBER: US/09/252,991A
;  CURRENT FILING DATE:  1999-02-18
;  PRIOR APPLICATION NUMBER:  US 60/074,788
;  PRIOR FILING DATE:  1998-02-18
;  PRIOR APPLICATION NUMBER:  US 60/094,190
;  PRIOR FILING DATE:  1998-07-27
;  NUMBER OF SEQ ID NOS:  33142
; SEQ ID NO 12363
;   LENGTH: 2262
;   TYPE: DNA
;   ORGANISM: Pseudomonas aeruginosa
US-09-252-991A-12363

  Query Match             100.0%;  Score 12;  DB 4;  Length 2262;
  Best Local Similarity   100.0%;  Pred. No. 1.4e+02;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db        167 TGCAGCGTTCTC 156


RESULT 14
US-08-264-002-1
; Sequence 1, Application US/08264002
; Patent No. 5559019
;  GENERAL INFORMATION:
;    APPLICANT:  GUI, JIAN-FANG
;    APPLICANT:  FU, XIANG-DONG
;    TITLE OF INVENTION:  NOVEL PROTEIN SERINE KINASE, SRPK1
;    NUMBER OF SEQUENCES:  17
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  SPENSLEY HORN JUBAS & LUBITZ
;      STREET:  1880 Century Park East, Fifth Floor
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  90067
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/264,002
;      FILING DATE:  22-JUN-1994
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  TUMARKIN PH.D., LISA A.
;      REGISTRATION NUMBER:  P-38,347
;      REFERENCE/DOCKET NUMBER:  PD3590
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  619/455-5100
;      TELEFAX:  619/455-5110
;  INFORMATION FOR SEQ ID NO:  1:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  4299 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  DNA (genomic)
;    IMMEDIATE SOURCE:
;      CLONE:  SRPK1
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  109..2073
US-08-264-002-1

  Query Match             100.0%;  Score 12;  DB 1;  Length 4299;
  Best Local Similarity   100.0%;  Pred. No. 1.5e+02;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db       3488 TGCAGCGTTCTC 3499


RESULT 15
US-09-221-017B-811
; Sequence 811, Application US/09221017B
; Patent No. 6444799
;  GENERAL INFORMATION:
;    APPLICANT:  Ross, Bruce C.
;    TITLE OF INVENTION:  P. GINGIVALIS NUCLEOTIDES AND USES THEREOF
;    NUMBER OF SEQUENCES:  1120
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  MORRISON & FOERSTER
;      STREET:  755 PAGE MILL ROAD
;      CITY:  Palo Alto
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  94304-1018
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  Windows
;      SOFTWARE:  FastSEQ for Windows Version 2.0b
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/221,017B
;      FILING DATE:  23-DEC-1998
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  PP1182
;      FILING DATE:  31-DEC-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  PP1546
;      FILING DATE:  30-JAN-1998
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  PP2911
;      FILING DATE:  09-APR-1998
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/AU98/01023
;      FILING DATE:  10-DEC-1998
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Monroy, Gladys H
;      REGISTRATION NUMBER:  32,430
;      REFERENCE/DOCKET NUMBER:  27340-20021.00
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  650-813-5600
;      TELEFAX:  650-494-0792
;      TELEX:  706141
;  INFORMATION FOR SEQ ID NO:  811:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  4413 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  double
;      TOPOLOGY:  circular
;    MOLECULE TYPE:  DNA (genomic)
;    HYPOTHETICAL:  NO
;    ANTI-SENSE:  UNKNOWN
;    ORIGINAL SOURCE:
;      ORGANISM:  PORYPHYROMONAS GINGIVALIS
;    FEATURE:
;      NAME/KEY:  misc_feature
;      LOCATION:  1...4413
US-09-221-017B-811

  Query Match             100.0%;  Score 12;  DB 4;  Length 4413;
  Best Local Similarity   100.0%;  Pred. No. 1.5e+02;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db       3042 TGCAGCGTTCTC 3053
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Job time : 21.7647 secs

GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: January 20, 2004, 16:34:44 ; Search time 79.4118 Seconds
(without alignments)
532.631 Million cell updates/sec

Title: US-10-068-160-74
Perfect score: 12
Sequence: 1 tgcagcgttctc 12

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 2324096 seqs, 1762381658 residues

Total number of hits satisfying chosen parameters: 4648192

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published_Applications_NA:*
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2: /cgn2_6/ptodata/1/pubpna/PCT_NEW_PUB.seq:*
3: /cgn2_6/ptodata/1/pubpna/US06_NEW_PUB.seq:*
4: /cgn2_6/ptodata/1/pubpna/US06_PUBCOMB.seq:*
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13: /cgn2_6/ptodata/1/pubpna/US09_NEW_PUB.seq2:*
14: /cgn2_6/ptodata/1/pubpna/US10A_PUBCOMB.seq:*
15: /cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
16: /cgn2_6/ptodata/1/pubpna/US10_NEW_PUB.seq:*
17: /cgn2_6/ptodata/1/pubpna/US60_NEW_PUB.seq:*
18: /cgn2_6/ptodata/1/pubpna/US60_PUBCOMB.seq:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	12	100.0	12	13	US-10-194-035-18	Sequence 18, Appl
2	12	100.0	12	15	US-10-068-160-74	Sequence 74, Appl
3	12	100.0	20	11	US-09-888-326-102	Sequence 102, App
4	12	100.0	20	11	US-09-776-479-715	Sequence 715, App
5	12	100.0	20	13	US-10-194-035-25	Sequence 25, Appl
6	12	100.0	20	15	US-10-112-653-688	Sequence 688, App
7	12	100.0	20	15	US-10-017-995-715	Sequence 715, App
8	12	100.0	177	11	US-09-764-891-2386	Sequence 2386, Ap
c 9	12	100.0	238	13	US-10-029-386-23488	Sequence 23488, A
10	12	100.0	258	9	US-09-923-876-6331	Sequence 6331, Ap
11	12	100.0	258	12	US-09-923-876-6331	Sequence 6331, Ap
c 12	12	100.0	375	10	US-09-960-352-1698	Sequence 1698, Ap
13	12	100.0	408	15	US-10-066-543-625	Sequence 625, App
c 14	12	100.0	421	10	US-09-884-441-157	Sequence 157, App
c 15	12	100.0	421	11	US-09-907-969-157	Sequence 157, App
c 16	12	100.0	421	13	US-09-827-271-157	Sequence 157, App
c 17	12	100.0	421	15	US-10-198-053-157	Sequence 157, App
c 18	12	100.0	430	13	US-10-027-632-272428	Sequence 272428,
c 19	12	100.0	430	14	US-10-027-632-272428	Sequence 272428,
20	12	100.0	431	9	US-09-922-217-541	Sequence 541, App
21	12	100.0	431	10	US-09-833-263-541	Sequence 541, App
22	12	100.0	431	14	US-10-025-380-541	Sequence 541, App
c 23	12	100.0	432	10	US-09-878-178-1126	Sequence 1126, Ap
c 24	12	100.0	432	14	US-10-046-935-1126	Sequence 1126, Ap
c 25	12	100.0	432	15	US-10-146-502-1126	Sequence 1126, Ap
26	12	100.0	474	11	US-09-918-995-33034	Sequence 33034, A
c 27	12	100.0	477	13	US-10-027-632-267906	Sequence 267906,
c 28	12	100.0	477	14	US-10-027-632-267906	Sequence 267906,
c 29	12	100.0	479	11	US-09-918-995-20210	Sequence 20210, A
30	12	100.0	555	15	US-10-066-543-750	Sequence 750, App
31	12	100.0	557	15	US-10-066-543-343	Sequence 343, App
32	12	100.0	561	15	US-10-066-543-665	Sequence 665, App
33	12	100.0	573	15	US-10-066-543-610	Sequence 610, App
c 34	12	100.0	590	15	US-10-066-543-144	Sequence 144, App
35	12	100.0	590	15	US-10-066-543-733	Sequence 733, App
c 36	12	100.0	599	13	US-10-029-386-9788	Sequence 9788, Ap
37	12	100.0	609	15	US-10-066-543-1014	Sequence 1014, Ap
38	12	100.0	621	15	US-10-066-543-526	Sequence 526, App
c 39	12	100.0	622	15	US-10-066-543-128	Sequence 128, App
40	12	100.0	624	15	US-10-066-543-638	Sequence 638, App
41	12	100.0	624	15	US-10-066-543-1146	Sequence 1146, Ap
42	12	100.0	629	15	US-10-066-543-518	Sequence 518, App
43	12	100.0	630	15	US-10-066-543-1021	Sequence 1021, Ap
c 44	12	100.0	634	15	US-10-066-543-152	Sequence 152, App
45	12	100.0	645	15	US-10-066-543-331	Sequence 331, App

ALIGNMENTS

RESULT 1
US-10-194-035-18
; Sequence 18, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
; APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
; APPLICANT: SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
; APPLICANT: KLINMAN, Dennis
; APPLICANT: ISHII, Ken
; APPLICANT: VERTHELYI, Daniela
; TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
; FILE REFERENCE: 4239-63317
; CURRENT APPLICATION NUMBER: US/10/194,035
; CURRENT FILING DATE: 2002-07-12
; PRIOR APPLICATION NUMBER: PCT/US01/01122
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: US 60/176,115
; PRIOR FILING DATE: 2000-01-14
; NUMBER OF SEQ ID NOS: 119
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 18
; LENGTH: 12
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-18

Query Match 100.0%; Score 12; DB 13; Length 12;
Best Local Similarity 100.0%; Pred. No. 1e+03;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db          1 TGCAGCGTTCTC 12
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RESULT 2

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US-10-068-160-74
; Sequence 74, Application US/10068160
; Publication No. US20030060440A1
; GENERAL INFORMATION:
;  APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA, REPRESENTED BY THE
;  APPLICANT:  SECRETARY, DEPARTMENT OF HEALTH AND HUMAN SERVICES
;  APPLICANT:  KLINMAN, Dennis
;  APPLICANT:  ISHII, Ken
;  APPLICANT:  VERTHELYI, Daniela
;  TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
;  FILE REFERENCE: 4239-61999
;  CURRENT APPLICATION NUMBER: US/10/068,160
;  CURRENT FILING DATE:  2002-02-06
;  PRIOR APPLICATION NUMBER: 60/128,898
;  PRIOR FILING DATE: 1999-04-12
;  NUMBER OF SEQ ID NOS: 120
;  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 74
;   LENGTH: 12
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Oligonucleotide
US-10-068-160-74

  Query Match             100.0%;  Score 12;  DB 15;  Length 12;
  Best Local Similarity   100.0%;  Pred. No. 1e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db          1 TGCAGCGTTCTC 12


RESULT 3
US-09-888-326-102
; Sequence 102, Application US/09888326
; Publication No. US20030026801A1
; GENERAL INFORMATION:
;  APPLICANT: Weiner, George
;  APPLICANT:  Hartmann, Gunther
;  TITLE OF INVENTION: Methods for Enhancing Antibody-Induced
;  TITLE OF INVENTION:  Cell Lysis and Treating Cancer
;  FILE REFERENCE: C1039/7052 (AWS)
;  CURRENT APPLICATION NUMBER: US/09/888,326
;  CURRENT FILING DATE:  2001-06-22
;  PRIOR APPLICATION NUMBER: US 60/213,346
;  PRIOR FILING DATE: 2000-06-22
;  NUMBER OF SEQ ID NOS: 848
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 102
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic oligonucleotide
;   NAME/KEY: misc_feature
;   LOCATION: (0)...(0)
;   OTHER INFORMATION: phosphodiester backbone
US-09-888-326-102

  Query Match             100.0%;  Score 12;  DB 11;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 1e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db          9 TGCAGCGTTCTC 20


RESULT 4
US-09-776-479-715
; Sequence 715, Application US/09776479
; Publication No. US20030087848A1
; GENERAL INFORMATION:
;  APPLICANT: Bratzler, Robert L.
;  APPLICANT:  Petersen, Deanna M.
;  APPLICANT:  Fouron, Yves
;  TITLE OF INVENTION: Immunostimulatory Nucleic Acids for the
;  TITLE OF INVENTION:  Treatment of Asthma and Allergy
;  FILE REFERENCE: C1037/7013 (HCL/MAT)
;  CURRENT APPLICATION NUMBER: US/09/776,479
;  CURRENT FILING DATE:  2001-02-02
;  PRIOR APPLICATION NUMBER: US 60/179,991
;  PRIOR FILING DATE: 2000-02-03
;  NUMBER OF SEQ ID NOS: 1093
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 715
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic Sequence
US-09-776-479-715

  Query Match             100.0%;  Score 12;  DB 11;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 1e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db          9 TGCAGCGTTCTC 20


RESULT 5
US-10-194-035-25
; Sequence 25, Application US/10194035
; Publication No. US20030144229A1
; GENERAL INFORMATION:
;  APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
;  APPLICANT:  SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
;  APPLICANT:  KLINMAN, Dennis
;  APPLICANT:  ISHII, Ken
;  APPLICANT:  VERTHELYI, Daniela
;  TITLE OF INVENTION: OLIGODEOXYNUCLEOTIDE AND ITS USE TO INDUCE AN IMMUNE RESPONSE
;  FILE REFERENCE: 4239-63317
;  CURRENT APPLICATION NUMBER: US/10/194,035
;  CURRENT FILING DATE:  2002-07-12
;  PRIOR APPLICATION NUMBER: PCT/US01/01122
;  PRIOR FILING DATE: 2001-07-19
;  PRIOR APPLICATION NUMBER: US 60/176,115
;  PRIOR FILING DATE: 2000-01-14
;  NUMBER OF SEQ ID NOS: 119
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 25
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-10-194-035-25

  Query Match             100.0%;  Score 12;  DB 13;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 1e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db          9 TGCAGCGTTCTC 20


RESULT 6
US-10-112-653-688
; Sequence 688, Application US/10112653
; Publication No. US20030050268A1
; GENERAL INFORMATION:
```

```
;  APPLICANT: Krieg, Arthur M.
;  APPLICANT:  Berg, Daniel J.
;  TITLE OF INVENTION: IMMUNOSTIMULATORY NUCLEIC ACID FOR
;  TITLE OF INVENTION:  TREATMENT OF NON-ALLERGIC INFLAMMATORY DISEASES
;  FILE REFERENCE: C01039/70060(AWS)
;  CURRENT APPLICATION NUMBER: US/10/112,653
;  CURRENT FILING DATE:  2002-03-29
;  PRIOR APPLICATION NUMBER: US 60/279,642
;  PRIOR FILING DATE: 2001-03-29
;  NUMBER OF SEQ ID NOS: 1040
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 688
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic Oligonucleotide
US-10-112-653-688

  Query Match             100.0%;  Score 12;  DB 15;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 1e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db          9 TGCAGCGTTCTC 20


RESULT 7
US-10-017-995-715
; Sequence 715, Application US/10017995
; Publication No. US20030055014A1
; GENERAL INFORMATION:
;  APPLICANT: Bratzler, Robert L.
;  TITLE OF INVENTION: Inhibition of Angiogenesis by Nucleic Acids
;  FILE REFERENCE: C1037/7025 (HCL/MAT)
;  CURRENT APPLICATION NUMBER: US/10/017,995
;  CURRENT FILING DATE:  2001-12-18
;  PRIOR APPLICATION NUMBER: US 60/255,534
;  PRIOR FILING DATE: 2000-12-14
;  NUMBER OF SEQ ID NOS: 1093
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 715
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic Sequence
US-10-017-995-715

  Query Match             100.0%;  Score 12;  DB 15;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 1e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db          9 TGCAGCGTTCTC 20


RESULT 8
US-09-764-891-2386
; Sequence 2386, Application US/09764891
; Publication No. US20030077808A1
; GENERAL INFORMATION:
;  APPLICANT: Rosen et al.
;  TITLE OF INVENTION: Nucleic Acids, Proteins, and Antibodies
;  FILE REFERENCE: PC006
;  CURRENT APPLICATION NUMBER: US/09/764,891
;  CURRENT FILING DATE:  2001-01-17
;  Prior application data removed - consult PALM or file wrapper
;  NUMBER OF SEQ ID NOS: 10231
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 2386
;   LENGTH: 177
;   TYPE: DNA
;   ORGANISM: Homo sapiens
;   FEATURE:
;   NAME/KEY: SITE
;   LOCATION: (142)
;   OTHER INFORMATION: n equals a,t,g, or c
US-09-764-891-2386

  Query Match             100.0%;  Score 12;  DB 11;  Length 177;
  Best Local Similarity   100.0%;  Pred. No. 9.4e+02;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db         73 TGCAGCGTTCTC 84


RESULT 9
US-10-029-386-23488/c
; Sequence 23488, Application US/10029386
; Publication No. US20030194704A1
; GENERAL INFORMATION:
;  APPLICANT: Penn, Sharron G.
;  APPLICANT:  Rank, David R.
;  APPLICANT:  Hanzel, David K.
;  TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL FOR
;  TITLE OF INVENTION:  EXPRESSION ANALYSIS TWO
;  FILE REFERENCE: AEOMICA-X-2
;  CURRENT APPLICATION NUMBER: US/10/029,386
;  CURRENT FILING DATE:  2001-12-20
;  NUMBER OF SEQ ID NOS: 34288
;  SOFTWARE: Annomax Sequence Listing Engine vers. 1.1
; SEQ ID NO 23488
;   LENGTH: 238
;   TYPE: DNA
;   ORGANISM: Homo sapiens
;   FEATURE:
;   OTHER INFORMATION: MAP TO CHR11.3
;   OTHER INFORMATION: EXPRESSED IN PLACENTA, SIGNAL = 1.5
;   OTHER INFORMATION: EXPRESSED IN HEART, SIGNAL = 2.1
;   OTHER INFORMATION: EXPRESSED IN HELA, SIGNAL = 2.7
;   OTHER INFORMATION: EXPRESSED IN BONE MARROW, SIGNAL = 1.6
;   OTHER INFORMATION: EXPRESSED IN FETAL LIVER, SIGNAL = 2.1
;   OTHER INFORMATION: EXPRESSED IN ADULT LIVER, SIGNAL = 2.2
;   OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 1.8
;   OTHER INFORMATION: SWISSPROT HIT: P01267, EVALUE 5.00e-04
;   OTHER INFORMATION: NT HIT: AJ400877.1, EVALUE 0.00e+00
;   OTHER INFORMATION: EST_HUMAN HIT: BF526465.1, EVALUE 1.00e-90
US-10-029-386-23488

  Query Match             100.0%;  Score 12;  DB 13;  Length 238;
  Best Local Similarity   100.0%;  Pred. No. 9.3e+02;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db         82 TGCAGCGTTCTC 71


RESULT 10
US-09-923-876-6331
; Sequence 6331, Application US/09923876
; Patent No. US20020013958A1
; GENERAL INFORMATION:
;  APPLICANT: Lalgudi, Raghunath V.
;  APPLICANT:  Kamigaki, Laura Y. (Ito)
;  APPLICANT:  Sherman, Bradley K.
;  TITLE OF INVENTION: POLYNUCLEOTIDES AND POLYPEPTIDES DERIVED FROM CORN SEEDLING
;  FILE REFERENCE: PL-0012-1 CON
;  CURRENT APPLICATION NUMBER: US/09/923,876
;  CURRENT FILING DATE:  2001-08-06
;  PRIOR APPLICATION NUMBER: 09/298,329
```

; PRIOR FILING DATE: 1999-04-21
; PRIOR APPLICATION NUMBER: 60/085,331
; PRIOR FILING DATE: 1998-05-05
; NUMBER OF SEQ ID NOS: 6332
; SOFTWARE: PERL Program
; SEQ ID NO 6331
; LENGTH: 258
; TYPE: DNA
; ORGANISM: Zea mays
; FEATURE:
; NAME/KEY: misc_feature
; OTHER INFORMATION: Incyte ID No. US20020013958A1 700458893H1
; NAME/KEY: unsure
; LOCATION: 43, 46
; OTHER INFORMATION: a, t, c, g, or other
US-09-923-876-6331

Query Match 100.0%; Score 12; DB 9; Length 258;
Best Local Similarity 100.0%; Pred. No. 9.3e+02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TGCAGCGTTCTC 12
||||||||||||
Db 85 TGCAGCGTTCTC 96

RESULT 11
US-09-923-876-6331
; Sequence 6331, Application US/09923876
; Publication No. US20030237110A9
; GENERAL INFORMATION:
; APPLICANT: Lalgudi, Raghunath V.
; APPLICANT: Kamigaki, Laura Y. (Ito)
; APPLICANT: Sherman, Bradley K.
; TITLE OF INVENTION: POLYNUCLEOTIDES AND POLYPEPTIDES DERIVED FROM CORN SEEDLING
; FILE REFERENCE: PL-0012-1 CON
; CURRENT APPLICATION NUMBER: US/09/923,876
; CURRENT FILING DATE: 2001-08-06
; PRIOR APPLICATION NUMBER: 09/298,329
; PRIOR FILING DATE: 1999-04-21
; PRIOR APPLICATION NUMBER: 60/085,331
; PRIOR FILING DATE: 1998-05-05
; NUMBER OF SEQ ID NOS: 6332
; SOFTWARE: PERL Program
; SEQ ID NO 6331
; LENGTH: 258
; TYPE: DNA
; ORGANISM: Zea mays
; FEATURE:
; NAME/KEY: misc_feature
; OTHER INFORMATION: Incyte ID No. US20030237110A9 700458893H1
; NAME/KEY: unsure
; LOCATION: 43, 46
; OTHER INFORMATION: a, t, c, g, or other
US-09-923-876-6331

Query Match 100.0%; Score 12; DB 12; Length 258;
Best Local Similarity 100.0%; Pred. No. 9.3e+02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TGCAGCGTTCTC 12
||||||||||||
Db 85 TGCAGCGTTCTC 96

RESULT 12
US-09-960-352-1698/c
; Sequence 1698, Application US/09960352
; Patent No. US20020137139A1
; GENERAL INFORMATION:
; APPLICANT: Warren, Wesley C.
; APPLICANT: Tao, Nengbing
; APPLICANT: Byatt, John C.
; APPLICANT: Mathialagan, Nagappan
; TITLE OF INVENTION: NUCLEIC ACID AND OTHER MOLECULES ASSOCIATED WITH LACTATION AND
; TITLE OF INVENTION: MUSCLE AND FAT DEPOSITION
; FILE REFERENCE: 16511.006/37-21(10298)C
; CURRENT APPLICATION NUMBER: US/09/960,352
; CURRENT FILING DATE: 2001-09-24
; NUMBER OF SEQ ID NOS: 15112
; SEQ ID NO 1698
; LENGTH: 375
; TYPE: DNA
; ORGANISM: Bos taurus
; OTHER INFORMATION: Clone ID: 08-LIB3057-008-Q1-K1-B11
US-09-960-352-1698

Query Match 100.0%; Score 12; DB 10; Length 375;
Best Local Similarity 100.0%; Pred. No. 9.2e+02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TGCAGCGTTCTC 12
||||||||||||
Db 343 TGCAGCGTTCTC 332

RESULT 13
US-10-066-543-625
; Sequence 625, Application US/10066543
; Publication No. US20030087818A1
; GENERAL INFORMATION:
; APPLICANT: Jiang, Yuqiu
; APPLICANT: Pyle, Ruth A.
; APPLICANT: Xu, Jiangchun
; APPLICANT: Indirias, Carol Yoseph
; APPLICANT: Lodes, Michael J.
; APPLICANT: Secrist, Heather
; APPLICANT: Carter, Darrick
; APPLICANT: Fanger, Gary R.
; APPLICANT: Smith, Carole L.
; APPLICANT: Durham, Margarita
; APPLICANT: Stolk, John A.
; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY
; TITLE OF INVENTION: AND DIAGNOSIS OF COLON CANCER
; FILE REFERENCE: 210121.563
; CURRENT APPLICATION NUMBER: US/10/066,543
; CURRENT FILING DATE: 2002-01-31
; NUMBER OF SEQ ID NOS: 3417
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 625
; LENGTH: 408
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-066-543-625

Query Match 100.0%; Score 12; DB 15; Length 408;
Best Local Similarity 100.0%; Pred. No. 9.2e+02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TGCAGCGTTCTC 12
||||||||||||
Db 380 TGCAGCGTTCTC 391

RESULT 14
US-09-884-441-157/c
; Sequence 157, Application US/09884441
; Patent No. US20020119158A1
; GENERAL INFORMATION:
; APPLICANT: Algate, Paul A.
; APPLICANT: Carter, Darrick
; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY AND
; TITLE OF INVENTION: DIAGNOSIS OF OVARIAN CANCER
; FILE REFERENCE: 210121.462C7
; CURRENT APPLICATION NUMBER: US/09/884,441
; CURRENT FILING DATE: 2001-06-18

; NUMBER OF SEQ ID NOS: 489
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 157
; LENGTH: 421
; TYPE: DNA
; ORGANISM: Homo sapien
US-09-884-441-157

Query Match 100.0%; Score 12; DB 10; Length 421;
Best Local Similarity 100.0%; Pred. No. 9.2e+02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TGCAGCGTTCTC 12
||||||||||||
Db 318 TGCAGCGTTCTC 307

RESULT 15
US-09-907-969-157/c
; Sequence 157, Application US/09907969
; Publication No. US20030091580A1
; GENERAL INFORMATION:
; APPLICANT: Mitcham, Jennifer L.
; APPLICANT: King, Gordon E.
; APPLICANT: Algate, Paul A.
; APPLICANT: Fling, Steven P.
; APPLICANT: Retter, Marc W.
; APPLICANT: Fanger, Gary Richard
; APPLICANT: Reed, Steven G.
; APPLICANT: Vedvick, Thomas S.
; APPLICANT: Carter, Darrick
; APPLICANT: Hill, Paul
; APPLICANT: Albone, Earl
; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY
; TITLE OF INVENTION: AND DIAGNOSIS OF OVARIAN CANCER
; FILE REFERENCE: 210121.462C8
; CURRENT APPLICATION NUMBER: US/09/907,969
; CURRENT FILING DATE: 2001-07-17
; NUMBER OF SEQ ID NOS: 596
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 157
; LENGTH: 421
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-907-969-157

Query Match 100.0%; Score 12; DB 11; Length 421;
Best Local Similarity 100.0%; Pred. No. 9.2e+02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TGCAGCGTTCTC 12
||||||||||||
Db 318 TGCAGCGTTCTC 307

Search completed: January 20, 2004, 17:24:42
Job time : 81.4118 secs

GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: January 20, 2004, 16:34:44 ; Search time 768.353 Seconds
(without alignments)
379.583 Million cell updates/sec

Title: US-10-068-160-74
Perfect score: 12
Sequence: 1 tgcagcgttctc 12

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 22781392 seqs, 12152238056 residues

Total number of hits satisfying chosen parameters: 45562784

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : EST:*
1: em_estba:*
2: em_esthum:*
3: em_estin:*
4: em_estmu:*
5: em_estov:*
6: em_estpl:*
7: em_estro:*
8: em_htc:*
9: gb_est1:*
10: gb_est2:*
11: gb_htc:*
12: gb_est3:*
13: gb_est4:*
14: gb_est5:*
15: em_estfun:*
16: em_estom:*
17: em_gss_hum:*
18: em_gss_inv:*
19: em_gss_pln:*
20: em_gss_vrt:*
21: em_gss_fun:*
22: em_gss_mam:*
23: em_gss_mus:*
24: em_gss_pro:*
25: em_gss_rod:*
26: em_gss_phg:*
27: em_gss_vrl:*
28: gb_gss1:*
29: gb_gss2:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	12	100.0	56	29	CNS04GF1	AL289558 Tetraodon
c 2	12	100.0	79	9	AA165763	AA165763 ms60f12.r
c 3	12	100.0	116	10	BE004779	BE004779 MR2-BN011
4	12	100.0	121	10	BG691216	BG691216 340278 BA
c 5	12	100.0	169	28	BH194564	BH194564 TC3-3E5.T
c 6	12	100.0	174	28	BH759248	BH759248 KG00610-3
7	12	100.0	181	13	BQ419254	BQ419254 faa36e08.
c 8	12	100.0	190	12	BM854919	BM854919 K-EST0137
9	12	100.0	201	9	AI203283	AI203283 qr24c10.x
10	12	100.0	211	9	AI858682	AI858682 wl41a09.x
c 11	12	100.0	221	10	BE831758	BE831758 RC0-MT005
c 12	12	100.0	227	12	BM797505	BM797505 K-EST0080
c 13	12	100.0	235	14	CA387791	CA387791 669857 NC
14	12	100.0	237	9	AW416284	AW416284 51479 MAR
15	12	100.0	238	28	AZ596456	AZ596456 1M0409A18
16	12	100.0	241	13	BU821792	BU821792 UB28CPA01
17	12	100.0	243	9	AW817473	AW817473 QV0-ST024
18	12	100.0	247	10	BE663022	BE663022 105343 MA
19	12	100.0	251	9	AA532401	AA532401 nj53e10.s
20	12	100.0	253	12	BP109757	BP109757 BP109757
21	12	100.0	256	12	BI593750	BI593750 As_L3_04B
c 22	12	100.0	262	10	BE762835	BE762835 QV3-NT002
23	12	100.0	265	14	CB884492	CB884492 Ma1072 Ha
24	12	100.0	267	29	BZ769276	BZ769276 SALK_1419
25	12	100.0	272	10	BG214763	BG214763 RST34417
c 26	12	100.0	272	10	BE090763	BE090763 PM1-BT072
c 27	12	100.0	278	9	AI505997	AI505997 vl23h04.x
c 28	12	100.0	282	10	BB245376	BB245376 BB245376
c 29	12	100.0	282	28	AZ818851	AZ818851 2M0089D11
c 30	12	100.0	285	9	AV343188	AV343188 AV343188
c 31	12	100.0	285	14	D81567	D81567 HUM173E01B
32	12	100.0	288	9	AV640115	AV640115 AV640115
33	12	100.0	288	9	AA323617	AA323617 EST26423
34	12	100.0	289	14	T19220	T19220 d01011t Tes
c 35	12	100.0	290	12	BI171742	BI171742 RE13575.5
c 36	12	100.0	290	13	BY156357	BY156357 BY156357
37	12	100.0	290	14	D53745	D53745 HUM118H10B
38	12	100.0	293	9	AV364570	AV364570 AV364570
c 39	12	100.0	302	9	AA256868	AA256868 zr81e12.r
c 40	12	100.0	304	9	AA328163	AA328163 EST31604
41	12	100.0	305	10	BE368376	BE368376 601220442
c 42	12	100.0	306	9	AA357910	AA357910 EST66772
c 43	12	100.0	306	10	AW862535	AW862535 QV0-CT038
c 44	12	100.0	306	13	BY268459	BY268459 BY268459
45	12	100.0	309	9	AW011732	AW011732 ul90f09.x

ALIGNMENTS

RESULT 1
CNS04GF1
LOCUS CNS04GF1 56 bp DNA linear GSS 01-SEP-2000
DEFINITION Tetraodon nigroviridis genome survey sequence PUC-Ori end of clone 108I20 of library G from Tetraodon nigroviridis, genomic survey sequence.
ACCESSION AL289558
VERSION AL289558.1 GI:8028135
KEYWORDS GSS; genome survey sequence.
SOURCE Tetraodon nigroviridis
ORGANISM Tetraodon nigroviridis
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei; Acanthomorpha; Acanthopterygii; Percomorpha; Tetraodontiformes; Tetradontoidea; Tetraodontidae; Tetraodon.
REFERENCE 1
AUTHORS Roest Crollius,H., Jaillon,O., Dasilva,C., Bouneau,L., Fisher,C., Bernot,A., Fizames,C., Wincker,P., Brottier,P., Quetier,F., Saurin,W. and Weissenbach,J.
TITLE Estimate of human gene number provided by genome-wide analysis using Tetraodon nigroviridis DNA sequence
JOURNAL Nat. Genet. 25 (2), 235-238 (2000)
MEDLINE 20296633
PUBMED 10835645
REFERENCE 2
AUTHORS Roest Crollius,H., Jaillon,O., Dasilva,C., Ozouf-Costaz,C., Fizames,C., Fischer,C., Bouneau,L., Billault,A., Quetier,F.,

```
            Saurin,W., Bernot,A. and Weissenbach,J.
  TITLE     Characterization and repeat analysis of the compact genome of the
            freshwater pufferfish Tetraodon nigroviridis
  JOURNAL   Genome Res. 10 (7), 939-949 (2000)
  MEDLINE   20359837
   PUBMED   10899143
REFERENCE   3  (bases 1 to 56)
  AUTHORS   Genoscope.
  TITLE     Direct Submission
  JOURNAL   Submitted (12-APR-2000) Genoscope - Centre National de Sequencage :
            BP 191 91006 EVRY cedex - FRANCE (E-mail : seqref@genoscope.cns.fr
            - Web : www.genoscope.cns.fr)
COMMENT     This sequence is a single read and was generated as part of a large
            scale clone-end sequencing project of the Tetraodon nigroviridis
            genome. For more information, please take a look at
            http://www.genoscope.cns.fr/Tetraodon.
FEATURES             Location/Qualifiers
     source          1. .56
                     /organism="Tetraodon nigroviridis"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:99883"
                     /clone="108I20"
                     /clone_lib="G"
                     /note="Genoscope sequence ID : C0BG108BE10SP1~end :
                     PUC-Ori"
BASE COUNT        5 a     14 c     16 g     20 t      1 others
ORIGIN

  Query Match             100.0%;  Score 12;  DB 29;  Length 56;
  Best Local Similarity   100.0%;  Pred. No. 4.5e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db         15 TGCAGCGTTCTC 26


RESULT 2
AA165763/c
LOCUS       AA165763                 79 bp    mRNA    linear   EST 12-FEB-1997
DEFINITION  ms60f12.r1 Stratagene mouse embryonic carcinoma (#937317) Mus
            musculus cDNA clone IMAGE:615983 5' similar to TR:E93245 E93245 ETN
            INSERT IN THE FAS APOPTOSIS GENE OF MRL-IPR/IPR. [1] ;, mRNA
            sequence.
ACCESSION   AA165763
VERSION     AA165763.1  GI:1743978
KEYWORDS    EST.
SOURCE      Mus musculus (house mouse)
  ORGANISM  Mus musculus
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
REFERENCE   1  (bases 1 to 79)
  AUTHORS   Marra,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dubuque,T.,
            Geisel,S., Kucaba,T., Lacy,M., Le,M., Martin,J., Morris,M.,
            Schellenberg,K., Steptoe,M., Tan,F., Underwood,K., Moore,B.,
            Theising,B., Wylie,T., Lennon,G., Soares,B., Wilson,R. and
            Waterston,R.
  TITLE     The WashU-HHMI Mouse EST Project
  JOURNAL   Unpublished
COMMENT     Contact: Marra M/Mouse EST Project
            WashU-HHMI Mouse EST Project
            Washington University School of MedicineP
            4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
            Tel: 314 286 1800
            Fax: 314 286 1810
            Email: mouseest@watson.wustl.edu
            This clone is available royalty-free through LLNL ; contact the
            IMAGE Consortium (info@image.llnl.gov) for further information.
            MGI:376807
            Possible reversed clone: similarity on wrong strand
            Seq primer: -28m13 rev1 ET from Amersham
            High quality sequence stop: 1.
FEATURES             Location/Qualifiers
     source          1. .79
                     /organism="Mus musculus"
                     /mol_type="mRNA"
                     /db_xref="taxon:10090"
                     /clone="IMAGE:615983"
                     /tissue_type="carcinoma"
                     /dev_stage="embryonic"
                     /lab_host="SOLR (kanamycin resistant)"
                     /clone_lib="Stratagene mouse embryonic carcinoma (#937317
                     )"
                     /note="Vector: pBluescript SK-; Site_1: EcoRI; Site_2:
                     XhoI; Cloned unidirectionally.  Primer: Oligo dT. P19 cell
                     line. Average insert size: 1.0 kb; Uni-ZAP XR Vector; ~5'
                     adaptor sequence: 5' GAATTCGGCACGAG 3' ~3' adaptor
                     sequence: 5' CTCGAGTTTTTTTTTTTTTTTT 3'"
BASE COUNT       28 a     15 c     24 g     12 t
ORIGIN

  Query Match             100.0%;  Score 12;  DB 9;  Length 79;
  Best Local Similarity   100.0%;  Pred. No. 5.1e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db         54 TGCAGCGTTCTC 43


RESULT 3
BE004779/c
LOCUS       BE004779                116 bp    mRNA    linear   EST 05-JUN-2000
DEFINITION  MR2-BN0114-270400-004-g06_1 BN0114 Homo sapiens cDNA, mRNA
            sequence.
ACCESSION   BE004779
VERSION     BE004779.1  GI:8265012
KEYWORDS    EST.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 116)
  AUTHORS   Dias Neto,E., Garcia Correa,R., Verjovski-Almeida,S., Briones,M.R.,
            Nagai,M.A., da Silva,W. Jr., Zago,M.A., Bordin,S., Costa,F.F.,
            Goldman,G.H., Carvalho,A.F., Matsukuma,A., Baia,G.S., Simpson,D.H.,
            Brunstein,A., deOliveira,P.S., Bucher,P., Jongeneel,C.V., O'Hare
            ,M.J., Soares,F., Brentani,R.R., Reis,L.F., de Souza,S.J. and
            Simpson,A.J.
  TITLE     Shotgun sequencing of the human transcriptome with ORF expressed
            sequence tags
  JOURNAL   Proc. Natl. Acad. Sci. U.S.A. 97 (7), 3491-3496 (2000)
  MEDLINE   20202663
   PUBMED   10737800
COMMENT     Contact: Simpson A.J.G.
            Laboratory of Cancer Genetics
            Ludwig Institute for Cancer Research
            Rua Prof. Antonio Prudente 109, 4 andar, 01509-010, Sao Paulo-SP,
            Brazil
            Tel: +55-11-2704922
            Fax: +55-11-2707001
            Email: asimpson@ludwig.org.br
            This sequence was derived from the FAPESP/LICR Human Cancer Genome
            Project. This entry can be seen in the following URL
            (http://www.ludwig.org.br/scripts/gethtml2.pl?t1=&t2=MR2-BN0114-270
            400-004-g06_1&t3=2000-04-27&t4=1)
            Seq primer: puc 18 forward
            High quality sequence stop: 116.
FEATURES             Location/Qualifiers
     source          1. .116
                     /organism="Homo sapiens"
                     /mol_type="mRNA"
                     /db_xref="taxon:9606"
                     /dev_stage="Adult"
                     /clone_lib="BN0114"
                     /note="Organ: breast_normal; Vector: puc18; Site_1: SmaI;
```

Site_2: SmaI; A mini-library was made by cloning products derived from ORESTES PCR (U.S. Letters Patent application No. 196,716 - Ludwig Institute for Cancer Research) profiles into the pUC 18 vector. Reverse transcription of tissue mRNA and cDNA amplification were performed under low stringency conditions."
BASE COUNT 36 a 27 c 27 g 26 t
ORIGIN

Query Match 100.0%; Score 12; DB 10; Length 116;
Best Local Similarity 100.0%; Pred. No. 5.7e+03;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TGCAGCGTTCTC 12
||||||||||||
Db 105 TGCAGCGTTCTC 94

RESULT 4
BG691216
LOCUS BG691216 121 bp mRNA linear EST 27-MAR-2003
DEFINITION 340278 BARC 5BOV Bos taurus cDNA 5', mRNA sequence.
ACCESSION BG691216
VERSION BG691216.1 GI:13933036
KEYWORDS EST.
SOURCE Bos taurus (cow)
ORGANISM Bos taurus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea; Bovidae; Bovinae; Bos.
REFERENCE 1 (bases 1 to 121)
AUTHORS Sonstegard,T., Capuco,A.V., White,J., Van Tassell,C.P., Connor,E.E., Cho,J., Sultana,R., Shade,L., Wray,J.E., Wells,K.D. and Quackenbush,J.
TITLE Analysis of bovine mammary gland EST and functional annotation of the Bos taurus gene index
JOURNAL Mamm. Genome 13 (7), 373-379 (2002)
MEDLINE 22135956
PUBMED 12140684
COMMENT Contact: Sonstegard TS
USDA, ARS, Beltsville Agricultural Research Center
Bdlg. 200 Rm 2A, Beltsville, MD 20705, USA
Tel: 301 504 8416
Fax: 301 504 8414
Email: tads@lpsi.barc.usda.gov
Single pass sequencing. Bases called and alt_trimmed with phred v0.980904.e. Vector identified by cross_match with the -minscore 18 and -minmatch 12 options.
PCR PRimers
FORWARD: AGGAAACAGCTATGACCAT
BACKWARD: GTTTTCCCAGTCACGACG
Plate: 98 row: B column: 5
Seq primer: ATTTAGGTGACACTATAG.
FEATURES Location/Qualifiers
source 1. .121
/organism="Bos taurus"
/mol_type="mRNA"
/db_xref="taxon:9913"
/tissue_type="pooled"
/lab_host="DH10B"
/clone_lib="BARC 5BOV"
/note="Vector: pCMV SPORT6; Site_1: NotI; Site_2: SalI; Library made from pooled mRNA isolated from mammary tissues at eight physiological, developmental, and disease states."
BASE COUNT 18 a 46 c 36 g 21 t
ORIGIN

Query Match 100.0%; Score 12; DB 10; Length 121;
Best Local Similarity 100.0%; Pred. No. 5.8e+03;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TGCAGCGTTCTC 12
||||||||||||
Db 88 TGCAGCGTTCTC 99

RESULT 5
BH194564/c
LOCUS BH194564 169 bp DNA linear GSS 24-OCT-2001
DEFINITION TC3-3E5.TV TC3 Trypanosoma cruzi genomic clone TC3-3E5, genomic survey sequence.
ACCESSION BH194564
VERSION BH194564.1 GI:16362417
KEYWORDS GSS.
SOURCE Trypanosoma cruzi
ORGANISM Trypanosoma cruzi
Eukaryota; Euglenozoa; Kinetoplastida; Trypanosomatidae; Trypanosoma; Schizotrypanum.
REFERENCE 1 (bases 1 to 169)
AUTHORS Kluge,S., Edwards,K.E., Nilsson,D., Bontempi,E.J., Myler,P., Stuart,K., Ghedin,E., El-Sayed,N.M. and Andersson,B.
TITLE Clustering and analysis of BAC-end and GSS sequences from Trypanosoma cruzi
JOURNAL Unpublished
COMMENT Other_GSSs: TC3-3E5.TP
Contact: Bjorn Andersson
Department of Genetics and Pathology
Uppsala University
Rudbeck Laboratory, SE-751 85, Uppsala, Sweden
Tel: 46 18 471 4107
Fax: 46 18 471 4808
Email: bjorn.andersson@genpat.uu.se
Clones are derived from the Trypanosoma cruzi CL-Brener BAC library TC3. For clone availability, please contact Dr. Bjorn Andersson at Uppsala University (bjorn.andersson@genpat.uu.se).
Seq primer: T7
Class: BAC ends.
FEATURES Location/Qualifiers
source 1. .169
/organism="Trypanosoma cruzi"
/mol_type="genomic DNA"
/strain="CL Brener"
/db_xref="taxon:5693"
/clone="TC3-3E5"
/clone_lib="TC3"
/note="Vector: pBeloBAC11; Site_1: Hin dIII; Constructed for Uppsala University by Marie-Christine Le Paslier in the laboratory of Denis Le Paslier at the Centre d'Etude du Polymorphisme Humain (CEPH), Paris, France. Briefly, Trypanosoma cruzi CL-Brener agarose embedded DNA (obtained from Dr. Franco da Silveira) was partially digested with Hin dIII. High molecular weight fragments were ligated in pBeloBAC11 digested with Hin dIII. The average insert size is 100 kb. Total clone coverage: approx. 33 X the haploid genome."
BASE COUNT 30 a 38 c 51 g 50 t
ORIGIN

Query Match 100.0%; Score 12; DB 28; Length 169;
Best Local Similarity 100.0%; Pred. No. 6.5e+03;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TGCAGCGTTCTC 12
||||||||||||
Db 99 TGCAGCGTTCTC 88

RESULT 6
BH759248/c
LOCUS BH759248 174 bp DNA linear GSS 12-MAR-2002
DEFINITION KG00610-3prime Drosophila melanogaster P{SUPor-P} P element insertion lines Drosophila melanogaster genomic Sequence recovered from 3' end of P element, genomic survey sequence.
ACCESSION BH759248
VERSION BH759248.1 GI:19352487

```
KEYWORDS    GSS.
SOURCE      Drosophila melanogaster (fruit fly).
  ORGANISM  Drosophila melanogaster
            Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
            Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
            Ephydroidea; Drosophilidae; Drosophila.
REFERENCE   1  (bases 1 to 174)
  AUTHORS   Levis,R., Hoskins,R., Liao,G., Mozden,N., Tsang,G., He,Y., Karpen
            ,G., Bellen,H., Rubin,G. and Spradling,A.
  TITLE     The Berkeley Drosophila Genome Project Gene Disruption Project
  JOURNAL   Unpublished
COMMENT     Contact: Gerald Rubin
            Berkeley Drosophila Genome Project
            University of California, Berkeley
            LSA Building, Berkeley, CA 94720-3200, USA
            Fax: 5106439947
            Email: gerry@fruitfly.berkeley.edu
            Sequence recovery method was inverse PCR.
             Sequence orientation is forward strand relative to 5' end of P
            element
             The P element insertion position is base 1 in the 174 bases. This
            insertion position refers to the first base of the 8 base target
            recognition sequence.
            Class: transposon-tagged.
FEATURES             Location/Qualifiers
     source          1. .174
                     /organism="Drosophila melanogaster"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:7227"
                     /clone_lib="Drosophila melanogaster P{SUPor-P} P element
                     insertion lines"
                     /note="Inverse PCR was performed on Drosophila
                     melanogaster strains each of which contains one or more
                     P{SUPor-P} P-element transposon insertion. The resultant
                     fragment for each strain was directly sequenced to
                     determine the genomic sequence at the site of insertion.
                     Details of the protocols used can be found at
                     http://www.fruitfly.org/about/methods/inverse.pcr.html."
BASE COUNT       48 a     36 c     51 g     39 t
ORIGIN

  Query Match             100.0%;  Score 12;  DB 28;  Length 174;
  Best Local Similarity   100.0%;  Pred. No. 6.5e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db        137 TGCAGCGTTCTC 126


RESULT 7
BQ419254
LOCUS       BQ419254                181 bp    mRNA    linear   EST 23-MAY-2002
DEFINITION  faa36e08.y1 zebrafish fin day3 regeneration Danio rerio cDNA clone
            IMAGE:5911382 5', mRNA sequence.
ACCESSION   BQ419254
VERSION     BQ419254.1  GI:21124455
KEYWORDS    EST.
SOURCE      Danio rerio (zebrafish)
  ORGANISM  Danio rerio
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniformes
            ; Cyprinidae; Danio.
REFERENCE   1  (bases 1 to 181)
  AUTHORS   Clark,M., Johnson,S.L., Lehrach,H., Lee,R., Li,F., Marra,M., Eddy
            ,S., Hillier,L., Kucaba,T., Martin,J., Beck,C., Wylie,T., Underwood
            ,K., Steptoe,M., Theising,B., Allen,M., Bowers,Y., Person,B.,
            Swaller,T., Gibbons,M., Pape,D., Harvey,N., Schurk,R., Ritter,E.,
            Kohn,S., Shin,T., Jackson,Y., Cardenas,M., McCann,R., Waterston,R.
            and Wilson,R.
  TITLE     WashU Zebrafish EST Project 1998
  JOURNAL   Unpublished
COMMENT     Contact: Stephen L. Johnson
            Washington University School of Medicine
            4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108, USA
            Tel: 314 286 1800
            Fax: 314 286 1810
            Email: zbrafish@watson.wustl.edu
            cDNA Library Preparation: Raymond Lee. cDNA Library Arrayed by:
            Matthew Clark. DNA Sequencing by: Washington University Genome
            Sequencing Center Clone distribution: Genome Systems, St. Louis,
            Missouri (web address: www.genomesystems.com) (email contact:
            info@genomesystems.com) and Research Genetics, Huntsville, Alabama
            (web address: www.resgen.com) (email contact: info@resgen.com) and
            RessourcenZentrumPrimarDatenbank, Berlin, Germany (web address:
            www.rzpd.de)
            Seq primer: T3 ET from Amersham.
FEATURES             Location/Qualifiers
     source          1. .181
                     /organism="Danio rerio"
                     /mol_type="mRNA"
                     /db_xref="taxon:7955"
                     /clone="IMAGE:5911382"
                     /sex="mixed male and female"
                     /tissue_type="3 day fin regenerates"
                     /lab_host="E. coli XLOLR"
                     /clone_lib="zebrafish fin day3 regeneration"
                     /note="Vector: pBK-CMV; Site_1: EcoRI; Site_2: XhoI; 1st
                     strand cDNA primed with (GA)10ACTAGTCTCGAG(T)18, followed
                     by second strand synthesis, and ligated to 5' adapter (5'
                     )-aattcggcacgag- 3', 3'-gccgtgctc-5'.  cDNA was cloned
                     directionally (EcoRI/XhoI) into Stratagene Zap express
                     lambda phage arms.  Mass invivo excision done to obtain
                     inserts in pBK-CMV phagemid."
BASE COUNT       63 a     47 c     39 g     32 t
ORIGIN

  Query Match             100.0%;  Score 12;  DB 13;  Length 181;
  Best Local Similarity   100.0%;  Pred. No. 6.6e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db         50 TGCAGCGTTCTC 61


RESULT 8
BM854919/c
LOCUS       BM854919                190 bp    mRNA    linear   EST 06-MAR-2002
DEFINITION  K-EST0137622 S21SNU520 Homo sapiens cDNA clone S21SNU520-58-D08 5',
            mRNA sequence.
ACCESSION   BM854919
VERSION     BM854919.1  GI:19211318
KEYWORDS    EST.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 190)
  AUTHORS   Kim,N.S., Hahn,Y., Oh,J.H., Lee,J.Y., Ahn,H.Y., Chu,M.Y., Kim,M.R.,
            Oh,K.J., Cheong,J.E., Sohn,H.Y., Kim,J.M., Park,H.S., Kim,S. and
            Kim,Y.S.
  TITLE     21C Frontier Korean EST Project 2001
  JOURNAL   Unpublished
COMMENT     Contact: Kim YS
            Genome Research Center
            Korea Research Institute of Bioscience & Biotechnology
            52 Eoeun-dong Yuseong-gu, Daejeon 305-333, South Korea
            Tel: +82-42-860-4470
            Fax: +82-42-860-4409
            Email: yongsung@mail.kribb.re.kr
            Plate: 58  row: D  column: 08
            High quality sequence stop: 190.
FEATURES             Location/Qualifiers
     source          1. .190
                     /organism="Homo sapiens"
```

```
                     /mol_type="mRNA"
                     /db_xref="taxon:9606"
                     /clone="S21SNU520-58-D08"
                     /sex="F"
                     /tissue_type="Stomach"
                     /cell_type="Floating aggregates"
                     /cell_line="SNU-520"
                     /lab_host="Top10F'"
                     /clone_lib="S21SNU520"
                     /note="Organ: Stomach; Vector: pTZ18RP1; Site_1: EcoRI;
                     Site_2: NotI; The poly (A)+ RNA was dephosphorylated with
                     bacterial alkaline phosphatase (BAP) and then decapped
                     with tabacco acid pyrophosphatase (TAP). The decapped
                     intact mRNA was ligated with DNA-RNA linker including EcoR
                     I site by treatment of T4 RNA ligase and the first strand
                     cDNA was synthesized from oligo dT-selected mRNA by
                     priming with dT-tailed vector. The dT-tailed vector was
                     adjusted to have about 60nt. The cDNA vector was
                     circularized with E. coli DNA ligase after digestion of
                     EcoRI which site is also included in vector. An RNA strand
                     converted to a DNA strand by Okayama-Berg method. The
                     obtained cDNA vectors were used for transformation of
                     competent cells E. coli Top10F' by electroporation method.
                     The cDNA libraries constructed by this method are
                     full-length enriched cDNA library."
BASE COUNT       50 a     47 c     47 g     46 t
ORIGIN

  Query Match             100.0%;  Score 12;  DB 12;  Length 190;
  Best Local Similarity   100.0%;  Pred. No. 6.7e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db        158 TGCAGCGTTCTC 147


RESULT 9
AI203283
LOCUS       AI203283                201 bp    mRNA    linear   EST 03-FEB-1999
DEFINITION  qr24c10.x1 NCI_CGAP_GC6 Homo sapiens cDNA clone IMAGE:1941810 3',
            mRNA sequence.
ACCESSION   AI203283
VERSION     AI203283.1  GI:3755889
KEYWORDS    EST.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 201)
  AUTHORS   NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
  TITLE     National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
            Tumor Gene Index
  JOURNAL   Unpublished
COMMENT     Contact: Robert Strausberg, Ph.D.
            Email: cgapbs-r@mail.nih.gov
            Tissue Procurement: Christopher A. Moskaluk, M.D., Ph.D., Michael
            R. Emmert-Buck, M.D., Ph.D.
             cDNA Library Preparation: M. Bento Soares, Ph.D., M. Fatima
            Bonaldo, Ph.D.
             cDNA Library Arrayed by: Greg Lennon, Ph.D.
             DNA Sequencing by: Washington University Genome Sequencing Center
             Clone distribution: NCI-CGAP clone distribution information can be
            found through the I.M.A.G.E. Consortium/LLNL at:
            www-bio.llnl.gov/bbrp/image/image.html
            Insert Length: 282   Std Error: 0.00
            Seq primer: -40UP from Gibco.
FEATURES             Location/Qualifiers
     source          1. .201
                     /organism="Homo sapiens"
                     /mol_type="mRNA"
                     /db_xref="taxon:9606"
                     /clone="IMAGE:1941810"
                     /tissue_type="pooled germ cell tumors"
                     /lab_host="DH10B"
                     /clone_lib="NCI_CGAP_GC6"
                     /note="Vector: pT7T3D-Pac (Pharmacia) with a modified
                     polylinker; Site_1: Not I; Site_2: Eco RI; Plasmid DNA
                     from the normalized library NCI_CGAP_GC4 was prepared, and
                     ss circles were made in vitro. Following HAP purification,
                     this DNA was used as tracer in a subtractive hybridization
                     reaction. The driver was PCR-amplified cDNAs from a pool
                     of 5,000 clones made from the same library (cloneIDs
                     1257096-1258631, 1469064-1470983, and 1475592-1476743).
                     Subtraction by Bento Soares and M. Fatima Bonaldo.  "
BASE COUNT       40 a     36 c     64 g     61 t
ORIGIN

  Query Match             100.0%;  Score 12;  DB 9;  Length 201;
  Best Local Similarity   100.0%;  Pred. No. 6.9e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db         74 TGCAGCGTTCTC 85


RESULT 10
AI858682
LOCUS       AI858682                211 bp    mRNA    linear   EST 07-MAR-2000
DEFINITION  wl41a09.x1 NCI_CGAP_Ut1 Homo sapiens cDNA clone IMAGE:2427448 3'
            similar to TR:O43791 O43791 SPOP. ;, mRNA sequence.
ACCESSION   AI858682
VERSION     AI858682.1  GI:5512298
KEYWORDS    EST.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 211)
  AUTHORS   NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
  TITLE     National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
            Tumor Gene Index
  JOURNAL   Unpublished
COMMENT     Contact: Robert Strausberg, Ph.D.
            Email: cgapbs-r@mail.nih.gov
            Tissue Procurement: Christopher Moskaluk, M.D., Ph.D., Michael R.
            Emmert-Buck, M.D., Ph.D.
             cDNA Library Preparation: Life Technologies, Inc.
             cDNA Library Arrayed by: Greg Lennon, Ph.D.
             DNA Sequencing by: Washington University Genome Sequencing Center
             Clone distribution: NCI-CGAP clone distribution information can be
            found through the I.M.A.G.E. Consortium/LLNL at:
            www-bio.llnl.gov/bbrp/image/image.html
            Insert Length: 1701   Std Error: 0.00
            Seq primer: -40UP from Gibco
            High quality sequence stop: 1.
FEATURES             Location/Qualifiers
     source          1. .211
                     /organism="Homo sapiens"
                     /mol_type="mRNA"
                     /db_xref="taxon:9606"
                     /clone="IMAGE:2427448"
                     /tissue_type="well-differentiated endometrial
                     adenocarcinoma, 7 pooled tumors"
                     /lab_host="DH10B"
                     /clone_lib="NCI_CGAP_Ut1"
                     /note="Organ: uterus; Vector: pCMV-SPORT6; Site_1: SalI;
                     Site_2: NotI; Cloned unidirectionally.  Primer: Oligo dT.
                     Average insert size 1.75 kb. Life Technologies catalog #:
                     11538-014"
BASE COUNT       54 a     56 c     52 g     47 t      2 others
ORIGIN

  Query Match             100.0%;  Score 12;  DB 9;  Length 211;
  Best Local Similarity   100.0%;  Pred. No. 7e+03;
```

```
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db        155 TGCAGCGTTCTC 166


RESULT 11
BE831758/c
LOCUS       BE831758                221 bp    mRNA    linear   EST 22-SEP-2000
DEFINITION  RC0-MT0059-210600-031-a08 MT0059 Homo sapiens cDNA, mRNA sequence.
ACCESSION   BE831758
VERSION     BE831758.1  GI:10264136
KEYWORDS    EST.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 221)
  AUTHORS   Dias Neto,E., Garcia Correa,R., Verjovski-Almeida,S., Briones,M.R.,
            Nagai,M.A., da Silva,W. Jr., Zago,M.A., Bordin,S., Costa,F.F.,
            Goldman,G.H., Carvalho,A.F., Matsukuma,A., Baia,G.S., Simpson,D.H.,
            Brunstein,A., deOliveira,P.S., Bucher,P., Jongeneel,C.V., O'Hare
            ,M.J., Soares,F., Brentani,R.R., Reis,L.F., de Souza,S.J. and
            Simpson,A.J.
  TITLE     Shotgun sequencing of the human transcriptome with ORF expressed
            sequence tags
  JOURNAL   Proc. Natl. Acad. Sci. U.S.A. 97 (7), 3491-3496 (2000)
  MEDLINE   20202663
   PUBMED   10737800
COMMENT     Contact: Simpson A.J.G.
            Laboratory of Cancer Genetics
            Ludwig Institute for Cancer Research
            Rua Prof. Antonio Prudente 109, 4 andar, 01509-010, Sao Paulo-SP,
            Brazil
            Tel: +55-11-2704922
            Fax: +55-11-2707001
            Email: asimpson@ludwig.org.br
            This sequence was derived from the FAPESP/LICR Human Cancer Genome
            Project. This entry can be seen in the following URL
            (http://www.ludwig.org.br/scripts/gethtml2.pl?t1=&t2=RC0-MT0059-210
            600-031-a08&t3=2000-06-21&t4=1)
            Seq primer: puc 18 forward
            High quality sequence start: 24
            High quality sequence stop: 108.
FEATURES             Location/Qualifiers
     source          1. .221
                     /organism="Homo sapiens"
                     /mol_type="mRNA"
                     /db_xref="taxon:9606"
                     /dev_stage="Adult"
                     /clone_lib="MT0059"
                     /note="Organ: marrow; Vector: puc18; Site_1: SmaI; Site_2:
                     SmaI; A mini-library was made by cloning products derived
                     from  ORESTES PCR (U.S. Letters Patent application No. 196
                     ,716 -  Ludwig Institute for Cancer Research) profiles
                     into  the pUC 18 vector. Reverse transcription of tissue
                     mRNA and cDNA amplification were performed under low
                     stringency conditions."
BASE COUNT       65 a     63 c     49 g     44 t
ORIGIN

  Query Match             100.0%;  Score 12;  DB 10;  Length 221;
  Best Local Similarity   100.0%;  Pred. No. 7.1e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db        134 TGCAGCGTTCTC 123


RESULT 12
BM797505/c
LOCUS       BM797505                227 bp    mRNA    linear   EST 05-MAR-2002
DEFINITION  K-EST0080661 S22SNU16n1 Homo sapiens cDNA clone S22SNU16n1-77-B01
            5', mRNA sequence.
ACCESSION   BM797505
VERSION     BM797505.1  GI:19145737
KEYWORDS    EST.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 227)
  AUTHORS   Kim,N.S., Hahn,Y., Oh,J.H., Lee,J.Y., Ahn,H.Y., Chu,M.Y., Kim,M.R.,
            Oh,K.J., Cheong,J.E., Sohn,H.Y., Kim,J.M., Park,H.S., Kim,S. and
            Kim,Y.S.
  TITLE     21C Frontier Korean EST Project 2001
  JOURNAL   Unpublished
COMMENT     Contact: Kim YS
            Genome Research Center
            Korea Research Institute of Bioscience & Biotechnology
            52 Eoeun-dong Yuseong-gu, Daejeon 305-333, South Korea
            Tel: +82-42-860-4470
            Fax: +82-42-860-4409
            Email: yongsung@mail.kribb.re.kr
            Plate: 77  row: B  column: 01
            High quality sequence stop: 227.
FEATURES             Location/Qualifiers
     source          1. .227
                     /organism="Homo sapiens"
                     /mol_type="mRNA"
                     /db_xref="taxon:9606"
                     /clone="S22SNU16n1-77-B01"
                     /sex="F"
                     /tissue_type="Ascites"
                     /cell_type="Lymphoblast-like"
                     /cell_line="SNU-16"
                     /lab_host="DH10B"
                     /clone_lib="S22SNU16n1"
                     /note="Organ: Stomach; Vector: pT7T3-Pac; Site_1: EcoRI;
                     Site_2: NotI; The S22SNU16 library was contributed by the
                     Soares laboratory and it was constructed as described by
                     Bonaldo, M.F., Lennon, G. and Soares, M.B. (1996), Genome
                     Research 6(9): 791-806. RNA was prepared from harvested
                     cells of SNU-16 culture. SNU-16 cell was obtained from
                     Korean Cell Line Bank (KCLB). SNU-16 was established from
                     ascitic fluids of Korean patients by Park J.G. et al.
                     (1990), Cancer Res 50: 2773-2780."
BASE COUNT       46 a     65 c     70 g     46 t
ORIGIN

  Query Match             100.0%;  Score 12;  DB 12;  Length 227;
  Best Local Similarity   100.0%;  Pred. No. 7.1e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db         23 TGCAGCGTTCTC 12


RESULT 13
CA387791/c
LOCUS       CA387791                235 bp    mRNA    linear   EST 06-NOV-2002
DEFINITION  669857 NCCCWA 1RT Oncorhynchus mykiss cDNA clone 1RT164L05_B_F03
            5', mRNA sequence.
ACCESSION   CA387791
VERSION     CA387791.1  GI:24716401
KEYWORDS    EST.
SOURCE      Oncorhynchus mykiss (rainbow trout)
  ORGANISM  Oncorhynchus mykiss
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Actinopterygii; Neopterygii; Teleostei; Euteleostei;
            Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
REFERENCE   1  (bases 1 to 235)
  AUTHORS   Rexroad,C.E. and Keele,J.W.
```

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  TITLE     Sequence analysis of a rainbow trout normalized cDNA library
  JOURNAL   Unpublished
COMMENT     Contact: Rexroad CE
            USDA, ARS, National Center for Cool and Cold Water Aquaculture
            11876 Leetown Road, Kearneysville, WV 25430, USA
            Tel: 304 724 8340 x2129
            Fax: 304 725 0351
            Email: crexroad@ncccwa.ars.usda.gov
            Single pass sequencing. Bases called with phred v0.020425.c and
            trimmed with the aid of the trim_alt option. Vector identified by
            cross_match v0.990329.
            Seq primer: AGCGGATAACAATTTCACACAGGA.
FEATURES             Location/Qualifiers
     source          1. .235
                     /organism="Oncorhynchus mykiss"
                     /mol_type="mRNA"
                     /db_xref="taxon:8022"
                     /clone="1RT164L05_B_F03"
                     /tissue_type="pooled"
                     /lab_host="DH10B"
                     /clone_lib="NCCCWA 1RT"
                     /note="Vector: pCMV SPORT6; Site_1: NotI; Site_2: SalI;
                     Library made from pooled tissue from brain, gill, liver,
                     spleen, muscle, and kidney."
BASE COUNT       35 a     63 c     88 g     49 t
ORIGIN

  Query Match             100.0%;  Score 12;  DB 14;  Length 235;
  Best Local Similarity   100.0%;  Pred. No. 7.2e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db        156 TGCAGCGTTCTC 145


RESULT 14
AW416284
LOCUS       AW416284                237 bp    mRNA    linear   EST 09-JUL-2000
DEFINITION  51479 MARC 2PIG Sus scrofa cDNA 5', mRNA sequence.
ACCESSION   AW416284
VERSION     AW416284.1  GI:6944166
KEYWORDS    EST.
SOURCE      Sus scrofa (pig)
  ORGANISM  Sus scrofa
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
REFERENCE   1  (bases 1 to 237)
  AUTHORS   Fahrenkrug,S.C., Smith,T.P.L., Freking,B.A., Cho,J., White,J.,
            Vallet,J., Wise,T., Rohrer,G.A., Pertea,G., Sultana,R., Quackenbush
            ,J. and Keele,J.W.
  TITLE     Porcine gene discovery by normalized cDNA-library sequencing and
            EST cluster assembly
  JOURNAL   Mamm. Genome 13 (8), 475-478 (2002)
  MEDLINE   22213789
   PUBMED   12226715
COMMENT     Contact: Smith TPL
            USDA, ARS, US Meat Animal Research Center
            PO Box 166, Clay Center, NE 68933-0166, USA
            Tel: 402 762 4366
            Fax: 402 762 4390
            Email: smith@email.marc.usda.gov
            Single pass sequencing. Bases called and trimmed with phred
            v0.980904.e. Vector identified by cross_match with the -minscore 20
            and -minmatch 12 options.
            PCR PRimers
            FORWARD: AGGAAACAGCTATGACCAT
            BACKWARD: GTTTTCCCAGTCACGACG
            Plate: 24  row: F  column: 6
            Seq primer: ATTTAGGTGACACTATAG.
FEATURES             Location/Qualifiers
     source          1. .237
                     /organism="Sus scrofa"
                     /mol_type="mRNA"
                     /db_xref="taxon:9823"
                     /tissue_type="pooled"
                     /lab_host="DH10B"
                     /clone_lib="MARC 2PIG"
                     /note="Vector: pCMV SPORT6; Site_1: NotI; Site_2: SalI;
                     Library made from pooled tissue from testis, ovary,
                     endometrium, hypothalamus, pituitary, and placenta."
BASE COUNT       50 a     69 c     67 g     51 t
ORIGIN

  Query Match             100.0%;  Score 12;  DB 9;  Length 237;
  Best Local Similarity   100.0%;  Pred. No. 7.2e+03;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db        182 TGCAGCGTTCTC 193


RESULT 15
AZ596456
LOCUS       AZ596456                238 bp    DNA     linear   GSS 13-DEC-2000
DEFINITION  1M0409A18R Mouse 10kb plasmid UUGC1M library Mus musculus genomic
            clone UUGC1M0409A18 R, genomic survey sequence.
ACCESSION   AZ596456
VERSION     AZ596456.1  GI:11718646
KEYWORDS    GSS.
SOURCE      Mus musculus (house mouse)
  ORGANISM  Mus musculus
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
REFERENCE   1  (bases 1 to 238)
  AUTHORS   Dunn,D., Aoyagi,A., Barber,M., Beacorn,T., Duval,B., Hamil,C.,
            Islam,H., Longacre,S., Mahmoud,M., Meenen,E., Pedersen,T., Reilly
            ,M., Rose,M., Rose,R., Stokes,R., Tingey,A., von Niederhausern,A.
            and Wright,D.,Weiss,R.
  TITLE     Mouse whole genome scaffolding with paired end reads from 10kb
            plasmid inserts
  JOURNAL   Unpublished
COMMENT     Contact: Robert B. Weiss
            University of Utah Genome Center
            University of Utah
            Rm. 308, Biomedical Polymers Research Bldg., 20 S. 2030 E., SLC, UT
            84112, USA
            Tel: 801 585 5606
            Fax: 801 585 7177
            Email: ddunn@genetics.utah.edu
            Insert Length: 10000   Std Error: 0.00
            Plate: 0409  row: A  column: 18
            Seq primer: CACACAGGAAACAGCTATGACC
            Class: plasmid ends
            High quality sequence stop: 238.
FEATURES             Location/Qualifiers
     source          1. .238
                     /organism="Mus musculus"
                     /mol_type="genomic DNA"
                     /strain="C57BL/6J"
                     /db_xref="taxon:10090"
                     /clone="UUGC1M0409A18"
                     /sex="Male"
                     /lab_host="E. Coli strain XL10-Gold, T1-resistant, F-"
                     /clone_lib="Mouse 10kb plasmid UUGC1M library"
                     /note="Vector: PWD42nv; Purified genomic DNA from M.
                     musculus C57BL/6J (male) was obtained  from the Jackson
                     Laboratory Mouse DNA Resource
                     (http://www.jax.org/resources/documents/dnares/). The DNA
                     was hydrodynamically sheared by repeated passage through a
                     0.005 inch orifice at constant velocity. The sheared DNA
                     was blunt end-repaired with T4 DNA polymerase and T4
                     polynucleotide kinase. Adaptor oligonucleotides were
                     ligated to the blunt ends in high  molar excess. The
                     adaptored DNA was purified and size-selected for a 9.5 to
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10.5 kb range using preparative agarose gel electrophoresis. Vector DNA was prepared from a derivative of pWD42 (gi|4732114|gb|AF129072.1), a copy-number inducible derivative of plasmid R1. The vector was ligated with adaptors complementary to the insert adaptors and purified. The sheared, adaptored mouse DNA was annealed to adaptored vector DNA, and transformed into chemically-competent E. coli XL10-Gold (Stratagene) cells and selected for ampicillin resistance."

BASE COUNT 57 a 58 c 57 g 66 t
ORIGIN

Query Match 100.0%; Score 12; DB 28; Length 238;
Best Local Similarity 100.0%; Pred. No. 7.2e+03;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 TGCAGCGTTCTC 12
              ||||||||||||
Db        152 TGCAGCGTTCTC 163
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Search completed: January 20, 2004, 18:44:52
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